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SHARP 21KF-80C SERVICE MANUAL

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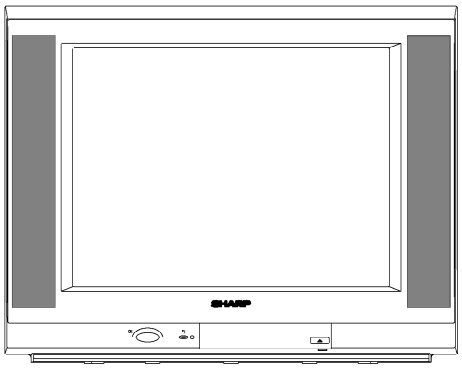
SHARP®

SERVICE MANUAL

SE0021KF80C00
Issued: 7th May 2003

GA-1E CHASSIS

PAL B/G - SECAM B/G, D/K SYSTEM COLOUR TELEVISION



MODEL 21KF-80C

In the interests of user safety (required by safety regulations in some countries) the set should restored to its original condition and only parts identical to those specified should be used.

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SHARP CORPORATION

This document has been published to be used for after sales service only.

Service Manual update log sheet

Technical Report No. Technical Bulletin No.	Cause / Solution	Part No.	Page No.	Application Data /Serial No.

Use this page to keep any special servicing information as Technical Report (Bulletin), Technical Information, etc.
If only part number changes are required, just change part number directly the part number in the Parts Listing Section.
If you need more information, please refer to the Technical Report (Bulletin).

ELECTRICAL SPECIFICATIONS

- Power Input ..... 220V-240 Volts AC 50Hz

- Power Consumption
  - Normal Operation (Method IEC60107) 49W
  - Stand-by Operation 3W

- Audio Power Output Rating ..... 4W x 2 (MPO)

- Speaker ..... 16Ω 4W, 12 x 5 cm, 2pcs

- Convergence ..... Self Converging System

- Focus ..... Bi-Potential Electrostatic

- Sweep Deflection ..... Magnetic

- Picture Intermediate Frequency
  - B/G 38.9MHz
  - D/K 38.9MHz

- Sound Carrier Trap
  - B/G 33.4MHz
  - D/K 32.4MHz

- Adjacent Sound Carrier Trap
  - B/G 40.4MHz
  - D/K 40.4MHz

- Adjacent Picture Carrier Trap
  - B/G 31.9MHz
  - D/K 30.9MHz

- Aerial Input Impedance
  - VHF/UHF ..... 75 ohm Unbalanced

- Tuning Ranges ..... 48.25MHz thru 855.25 MHz
  - VHF CH02-CH12, R01-R12
    S1-S41 (HYPERBAND)
  - UHF ..... CH21 - CH69

- White Level

Set the brightness control, with no signal connected, so that the CRT cathode current is 600μA. The maximum correction applied to each cathode current to achieve a screen temperature of 7250 degrees K-11 MPCD should not exceed 15% of its original value.

X=0.304 ± 0.015 Y=0.306 ± 0.015

Specifications are subject to change without prior notice.

WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.
To prevent electric shock, do not remove cover. No user-serviceable parts inside. Refer servicing to qualified service personnel.

IMPORTANT SERVICING NOTES

Only qualified service personnel are allowed to carry out maintenance and repair of this receiver.

Servicing of high voltage system and CRT

It is important that the static charge is removed from the high voltage system when carrying out work on the receiver. This can be achieved by connecting a 10K resistor (with a suitably insulated lead) from the CRT cavity connector to the CRT ground tag. This must be carried out with the AC supply disconnected from the receiver. Note the following:

- The CRT in this receiver employs Integral Implosion Protection.
- If the CRT has to be changed it MUST be replaced with the correct type for continued safe working
- DO NOT lift the CRT by its neck.
- When handing the CRT, ensure that shatterproof goggles are worn.
- Ensure that the CRT is discharge before handling.

X-Ray

This receiver is designed to keep any x-ray emission to an absolute minimum. Some fault conditions and servicing procedures may produce potentially hazardous x-ray radiation levels. This is a problem when in close proximity to the receiver for long periods of time. To reduce any risks associated with this, please observe the following precautions:

1. When undertaking any servicing on this chassis, DO NOT increase the EHT to more than 31.0 KV, (at a instantaneous beam current of 1200μA).
2. Ensure that during normal operation the EHT does not exceed 27.5 KV±1.5KV (at a beam current of 1050μA). This level has been preset in the factory. Always check that this level has not been exceeded after carrying out any repair on the receiver.
3. DO NOT replace the CRT with any other type than that specified in the parts listing as this may cause excessive x-ray radiation.

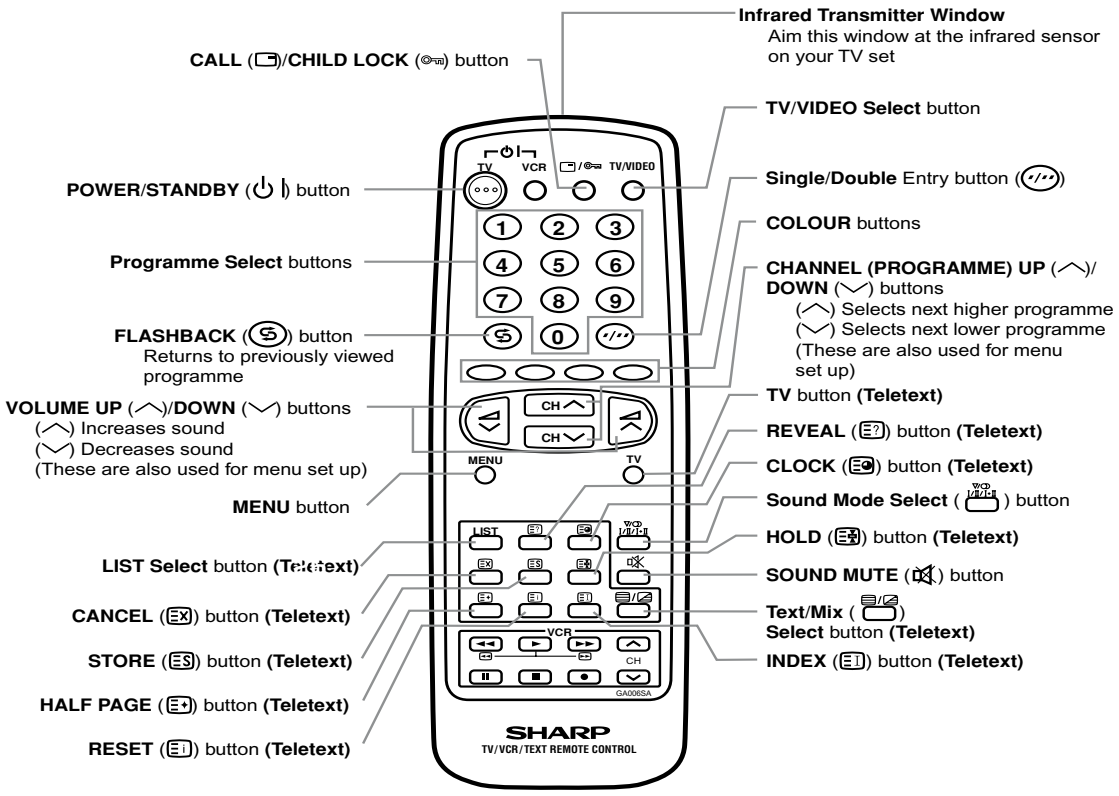
Before returning the receiver to the customer

In addition to the above checks, the following should also be carried out before returning the receiver to the customer.

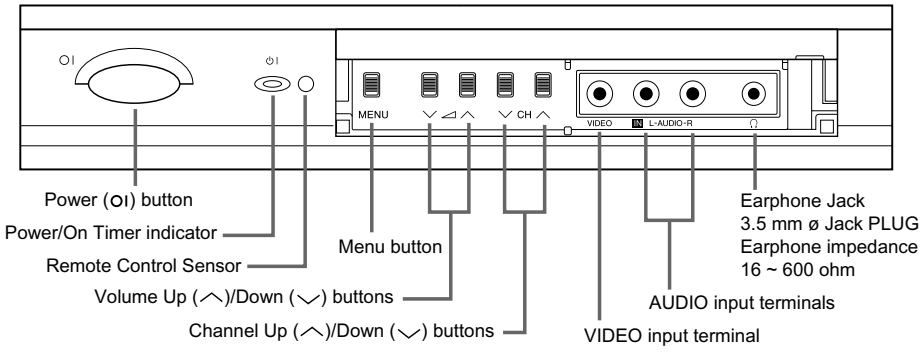
1. Inspect all the leads to ensure that they are dressed correctly and that they are not obstructed or pinched by any other parts.
2. Ensure that all protective devices are in good condition. These will include nonmetallic control knobs, insulating fish papers, cabinets backs, compartment covers or shields, mechanical insulators, etc.

CONTROLS & TERMINALS

Remote Control



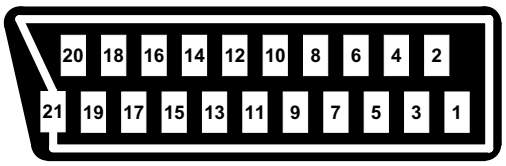
TV Front



Euro-SCART 21-Pin Terminal

For greater A/V enjoyment, various audio and video devices may be connected via the Euro-SCART 21-Pin Terminal.

21-Pin Euro-SCART



1. Audio right output
2. Audio right input
3. Audio left output
4. Common earth for audio
5. Earth for blue
6. Audio left input
7. Blue input
8. Audio-video control
9. Earth for green
10. Not used
11. Green input
12. Not used
13. Earth for red
14. Not used
15. Red input
16. Red/Green/Blue control
17. Earth for video
18. Earth for video
19. Video output
20. Video input
21. Plug shield

Note: Stereo Input / Output .

ADJUSTMENT PROCEDURES

Service Mode function

All required adjustments for servicing this TV set, may be done in “service mode”, excepting G2 and FOCUS.

How to access the Service Mode

1. Turn the receiver on and ensure that it is tuned into a test pattern.
2. Turn the receiver off using the mains switch.
3. Press the volume down and channel up buttons together. See Fig.1.
4. Continue pressing the volume down and channel up buttons while turning the mains on using the mains switch. See Figure 1.

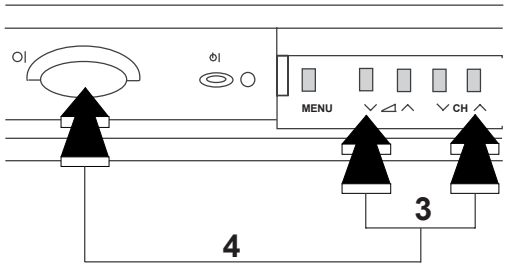


Figure 1

5. Keep pressing the volume down and channel up buttons until the picture appears.
6. When <<SHARPX X VXX.XX>> appears on the screen, release the two buttons.
7. The receiver is now in the service mode.

To move between the various service mode functions, use the channel up and down buttons.

Use the volume buttons to change the data to the desired value.

The data will be stored automatically when exiting the service mode. To exit the service mode press the stand-by button the remote control or turn the receiver off with the mains switch.

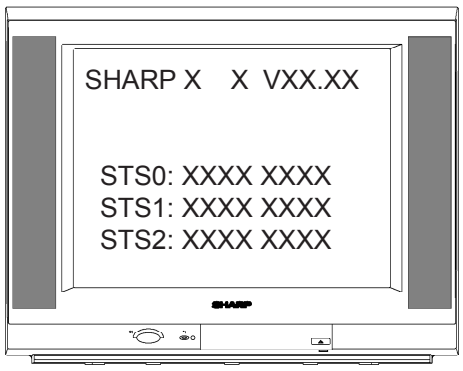


Figure 2

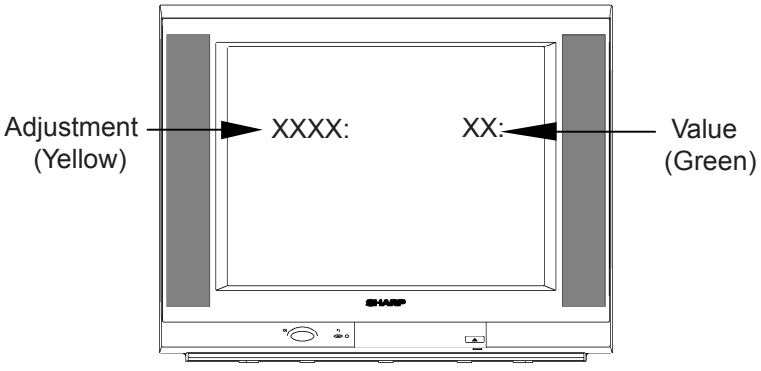


Figure 3

Service adjustment and data list

The table below shows the various service mode positions, range of values and default value. The columns are headed as below.

Heading: Descriptions:

OSD This is what will appear on the screen at this position.

Function This is the description of the mode's function.

Range This is the range of values that can be entered while in this mode.

Initial This is the initial value, i.e. just after changing the NVM. Shadowed values are those to be modified in Default.

Default This is the recommended default value for this model.

FIX/ADJ If this is ADJ, then it may be necessary to adjust this value away from the default.

No.	OSD	Function	Range	Initial	Default	FIX/ADJ
1	AGC	AGC Take Over Point	0...63	34	34	ADJ
2	V-LIN	Vertical Slope [VS]	0...63	33	33	ADJ
3	V-AMP	Vertical Amplitude [VA]	0...63	18	18	ADJ
4	V-CENT	Vertical Shift [VSH]	0...63	17	17	ADJ
5	H-CENT	Horizontal shift [HS]	0...63	34	34	ADJ
6	H-CENT60	offset to H-CENT for 60 Hz	0...31 data(-16..+15)	20	20	FIX
7	EW / /	Horizontal Parallelogram [HP]	0...63	32	32	FIX
8	HB	Horizontal Bow	0...63	32	32	FIX
9	S-COR	S-Correction [SC]	0...63	22	30	FIX
10	DRI-RS	White point Red Standard white temp.	0...63	42	42	ADJ
11	DRI-GS	White point Green Standard white temp.	0...63	42	42	ADJ
12	DRI-BS	White point Blue Standard white temp	0...63	42	42	ADJ
13	DRI-RW	White point Red Warm white temp.	0...32	16	16	FIX
14	DRI-GW	White point Green Warm white temp.	0...32	9	9	FIX
15	DRI-BW	White point Blue Warm white temp.	0...32	9	9	FIX
16	DRI-RC	White point Red Cold white temp.	0...32	9	9	FIX
17	DRI-GC	White point Green Cold white temp.	0...32	9	9	FIX
18	DRI-BC	White point Blue Cold white temp.	0...32	16	16	FIX
19	SUB-VOL	Max Volume	0...63	60	60	FIX
20	SUB-CON	Sub Contrast	0...63	63	63	FIX
21	SUB-COL	Sub Colour	0...63	25	25	FIX
22	SUB-BRI	Sub Brightness	0...63	34	34	FIX
23	TINT	Sub Tint	0...63	32	32	FIX
24	SUB-SHP	Sub Sharpness	0...63	11	25	FIX
25	HTL-VOL	Max Hotel Volume	0...63	30	30	FIX

No.	OSD	Function	Range	Initial	Default	FIX/ADJ
26	HTL-PRG	Hotel Program number	0...99 or > 99 for none	255	255	FIX
27	RGB	OSD RGB Reference	0...15	0	0	FIX
28	SEARCH-SYS	Sound system for auto tuning	0(L-BG),1(BG),2(I),3(DK)	1	3	FIX
29	CUT-R	Black Level off-set R [BLR]	0...63	0	0	FIX
30	CUT-G	Black Level off-set G [BLG]	0...63	10	24	FIX
31	CDL	Cathode Drive Level [CL]	0...15	5	5	FIX
32	DL-PT	Y-Delay time for PAL (TV) [YD]	0...15	4	4	FIX
33	DL-ST	Y-Delay time for SECAM (TV) [YD]	0...15	8	8	FIX
34	DL-4T	Y-Delay time for N443 (TV) [YD]	0...15	8	8	FIX
35	COL-OP	COLOUR OFFSET (PAL)	0...15	8	8	FIX
36	COL-OS	COLOUR OFFSET (SECAM)	0...15	8	8	FIX
37	COL-O4	COLOUR OFFSET (NTSC443)	0...15	4	4	FIX
38	SHP-OP	SHARPNESS OFFSET(PAL)	0...15	8	8	FIX
39	SHP-OS	SHARPNESS OFFSET(SECAM)	0...15	4	4	FIX
40	SHP-O4	SHARPNESS OFFSET(NTSC443)	0...15	8	8	FIX
41	SC-VOL	SCART volume	0..255	109	109	FIX
42	PRE-SC	Prescaler SCART input	0..127	25	25	FIX
43	PRE-FM	Prescaler FM/AM	0..127	72	72	FIX
44	PRE-NICAM	Prescaler SCART input	0..127	90	90	FIX
45	PRE-M	Prescaler SCART input for LL' mono	0..127	3	0	FIX
46	AVC-DKY	AVC Decay	0...3 data (1.2.4.8.)	1	1	FIX
47	AC-OFF-TIM	Time to set the AC-OFF timer is in steps of 10 minutes	0...15	0	0	FIX
48	DISP	Language or symbols	0(symbols), 1(English), 2(French)	0	0	FIX
49	TXT-EUR	Teletext pan-European language	0 (pan-europe) 1 (cyrillic) 2(Greek)	0	1	FIX
50	BKS	Black Stretch	0 (disable) or 1 (enable)	1	1	FIX
51	AVC	Automatic Volume Control(AVL)	0 (disable) or 1 (enable)	1	1	FIX
52	FFI	Fast Filter IF-PLL	0 (disable) or 1 (enable)	0	0	FIX
53	ACL	Auto Colour Limit	0 (disable) or 1 (enable)	1	1	FIX
54	S-L	Sound system L	0 (disable) or 1 (enable)	0	0	FIX
55	S-DK	Sound system DK	0 (disable) or 1 (enable)	1	1	FIX
56	S-I	Sound system I	0 (disable) or 1 (enable)	1	0	FIX
57	S-BG	Sound system BG	0 (disable) or 1 (enable)	1	1	FIX
58	BLUE-BACK	Video mute at Ident loss	0 (disable) or 1 (enable)	1	1	FIX
59	VMC	Video Mute at program/source Change	0 (disable) or 1 (enable)	1	1	FIX
60	HTL	Hotel mode	0 (disable) or 1 (enable)	0	0	FIX
61	BTSC	Reduced FM demodulator Gain (for BTSC sig)	0 (disable) or 1 (enable)	0	0	FIX
62	AV	Number of external AV sources	0 for 1 AV or 1 for 2 AV	0	1	FIX
63	FMWS	FM Window Selection	0 (disable) or 1 (enable)	0	0	FIX
64	SM0	Sound Mute bit 0	0 (disable) or 1 (enable)	1	1	FIX
65	SM1	Sound Mute bit 1	0 (disable) or 1 (enable)	0	0	FIX
66	AGC0	IF AGC speed bit0	0 (disable) or 1 (enable)	1	1	FIX
67	AGC1	IF AGC speed bit1	0 (disable) or 1 (enable)	0	0	FIX
68	FOA-FE	Phi 1 time constant for FE(RF)	0 (disable) or 1 (enable)	0	0	FIX
69	FOB-FE	Phi 2 time constant for FE(RF)	0 (disable) or 1 (enable)	0	0	FIX
70	FOA-AV	Phi 1 time constant for AV	0 (disable) or 1 (enable)	1	1	FIX
71	FOB-AV	Phi 2 time constant for AV	0 (disable) or 1 (enable)	1	1	FIX
72	TXT	Teletext	0 (disable) or 1 (enable)	1	1	FIX
73	TXT-WE	Teletext Western or Eastern characters	0 (western) or 1 (eastern)	0	1	FIX
74	FSL	Forced V-SYNC slicing level	0 (disable) or 1 (enable)	0	0	FIX
75	HP2	Sync of OSD	0 for Ph1 or 1 for Ph2	0	0	FIX
76	CP	Charge pump	0 (fast tuning) or 1 (moderate)	0	0	FIX
77	NICAM	NICAM decoding enabled	0 (disable) or 1 (enable)	1	1	FIX
78	IGR	IGR decoding enabled	0 (disable) or 1 (enable)	1	1	FIX
79	AUTO	Start auto tuning at POWER-ON	0 (disable) or 1 (enable)	0	0	FIX
80	TXT-TGL	Function of TXT key	0 or 1	0	0	FIX
81	EVG	Enable Vertical Guard	0 (disable) or 1 (enable)	1	1	FIX

Screen adjustment

1. G2 Adjustment

1. Enter the service mode (see page 6).
2. Use the channel up or channel down buttons to enter the << BLUE-BACK >> function.
3. Set this to << BLUE-BACK: 0 >>, i.e. blue background is turned off.
4. Turn the set off at the mains.
5. Turn the set back on.
6. Set the picture control settings to normal.
7. Select the SCART input by pressing the TV/SCART button on the remote control. Do not connect an input to the SCART socket. A blank raster will appear.
8. Connect an oscilloscope to TP851 on the CRT PWB. The waveform as in figure 4 should be displayed.
9. Adjust the G2 control (screen voltage) so that the peak of this waveform is 3.5V +/-0.1V above the zero volt line.
10. Enter the service mode.
11. Turn the blue background function back on again - set << BLUE-BACK: 1 >>.
12. Turn off the receiver using the mains button.
13. The G2 adjustment is now complete.

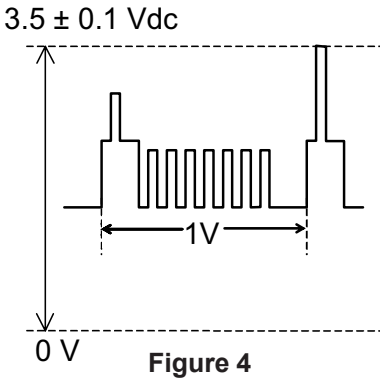


Figure 4

2. Focus Adjustment

1. Receive a monoscope pattern signal at a level of 60 to 80 dBμV.
2. Set the picture settings to normal.
3. Adjust the focus potentiometer to obtain maximum definition.

AGC Adjustment

1. Tune the receiver into a colour bar signal on channel E-12.
2. Set the RF generator to an output signal strength of 59 dB/μV (+/-1dBμV) –75 Ohms.
3. Connect an oscilloscope to TP201. TP201 is one end of R201.
4. Enter the service mode (see page 6).
5. Use the channel up and channel down buttons to enter the AGC mode.
6. By using the volume up and the volume down buttons, adjust the AGC until the voltage on TP201 drops by 0.1V to 0.3V below its maximum value.
7. Change the input signal strength to 66-70dBμV and make sure that there is no noise apparent in the picture.
8. Turn the receiver off at the mains, this will exit the service mode and store the adjustment.

Geometry adjustment procedure

To adjust the geometry, follow the procedure outlined below:

1. Tune the set into a Philips test pattern.
2. Enter the service mode as described on page 6.
3. Use the channel up or channel down buttons to enter the desired mode
4. Use the volume buttons to achieve correct setting.
5. When adjustments are complete, use the stand-by button to turn off the set. The adjustment values will be stored at this point.

V-LIN
Adjust the vertical linearity control so that the picture centring is as shown in figure 5.

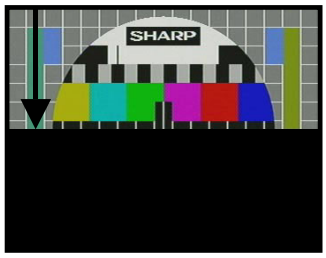


Figure 5

V-AMP
Adjust the vertical amplitude control so that the picture overscans as shown in figure 6.

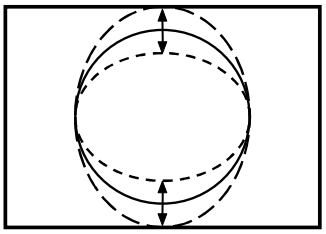


Figure 6

V-CENT
Adjust the vertical centring control so that the picture is centred as shown in figure 7.

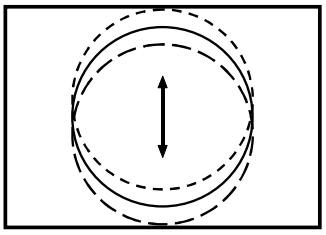


Figure 7

H-CENT
Adjust the horizontal centring control so that the picture is centred as shown in figure 8.

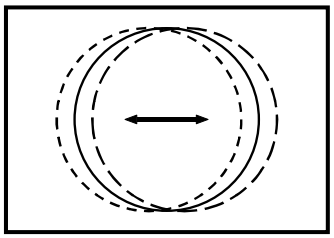


Figure 8

Colour adjustment procedure

The following adjustments should only be carried out when the CRT or IC801 are replaced.

Notes:

1. This adjustment must be done after warming up the unit for 30 minutes or longer with a beam current over 700 µA.
2. The red value «DRI-RS» should be fixed to 42. (Refer to “How to access service mode” section).
3. «DRI-GS» adjustment alters “Y” coordinate.
4. «DRI-BS» adjustment alters “X” and “Y” coordinates.

Adjustment method 1 (using the signal generator, varying the picture signal)

1. Adjust G2.
2. Input a white pattern with burst signal from SCART.
3. Position the colorimeter in the centre of screen.
4. Adjusting input signal level, select a luminance of 70 nits.
5. Operate again in “service mode“ and select «DRI-GS» and/or «DRI-BS» locations to obtain colour coordinates:

X=0.304 ± 0.015 Y=0.306 ± 0.015 Screen Temperature: 7250º K-11 MPCD

6. Reset the TV with the mains switch button to store the adjustment and exit service mode.
7. Check colour coordinates “X” and “Y” at 20 a 120 Nits. It may be necessary to repeat the same procedure to obtain the above values.

Adjustment method 2 (using the signal generator, with a fixed picture signal)

1. Adjust G2.
2. Tune a white pattern with burst signal.
3. Operate in “service mode”:
4. Using «SUB-CON», select a luminance of 70 nits.
5. Operate again in “service mode“ and select «DRI-GS» and/or «DRI-BS» locations to obtain colour coordinates:

X=0.304 ± 0.015 Y=0.306 ± 0.015 Screen Temperature: 7250º K-11 MPCD

6. Select «SUB-CON». Return data to “63”.
7. Reset the TV with the mains switch button to store the adjustment and exit service mode.
8. Check colour coordinates “X” and “Y” at 20 a 120 Nits. It may be necessary to repeat the same procedure to obtain the above values.

HOTEL MODE FUNCTIONS

The following procedure details how to set up the Hotel Mode Functions.

1. Short Description

1.1. Hotel Mode “HTL”: Main Hotel Mode. It deactivates “Channel Setting” functions. It reduces the Maximum Volume.

1.2. Hotel Mode “HTL-VOL”: Maximum Volume Level Regulation.

1.3 Hotel Mode “HTL-PRG”: Fixing start up program when the TV set is switched on.

2. Before start

2.1. It is necessary to program “Channel Setting” before setting up Hotel Mode “HTL” because after that Channel Setting are deactivated.

2.2. Consider that regarding TXT Features, after activate any of the Hotel modes in the “List Mode” will not be stored any page.

2.3. Consider that changed video control values are not stored.

3. Procedure

3.1. Hotel Mode “HTL” (Main Hotel Mode).

3.1.1. Previous Service Information: Initial Value: 0. Range: 0 to 1. Service Mode Indication: HTL.

3.1.2. Access the Service Mode (see this procedure on page 6).

3.1.3. Select “HTL” by using channel up/down buttons.

3.1.4. Change initial value from “0” (off) to “1” (on).

3.1.5. Notes:

3.1.5.1. The maximum volume level has been reduced from 60 to 30. For other value go to 3.2. Hotel Mode “HTL-VOL”

3.1.5.2. “Channel Setting” functions have been deactivated.

3.1.5.3. It is necessary to select Hotel Mode “HTL” to be able to set up Hotel Mode “HTL-VOL” or Hotel Mode “HTL-PRG”.

3.1.5.4. If you do not need to set up Hotel Mode “HTL-VOL” or “HTL-PRG” get out from Service Mode (To exit the Service Mode press the stand-by button on the remote control or turn the receiver off with the mains switch).

3.2. Hotel Mode “HTL-VOL” (Maximum Volume Level Regulation)

3.2.1. Previous Service Information: Initial value: 30. Range: 0 to 60. Service Mode indication: HTL-VOL.

3.2.2. To activate this Hotel Mode it is necessary activate previously Hotel Mode “HTL”. Then the maximum volume level changed fro 60 to 30 as initial value.

3.2.3. Select “HTL-VOL” by using channel up/down buttons.

3.2.4. Set the value according to your necessities by using volume up/down buttons.

3.2.5. Note: If you do not need to set up Hotel Mode “HTL-PRG” get out from Service Mode (To exit the Service Mode press the stand-by button on the remote control or turn the receiver off with the mains switch).

3.3. Hotel Mode “HTL-PRG” (Fixing start up program when the TV Set is switched on)

3.3.1. Initial value: 255. Range: 0 to 255. Service Mode indication: HTL-PRG.

3.3.2. To activate this Hotel Mode it is necessary activate previously Hotel Mode “HTL”.

3.3.3. Select “HTL-PRG” by using channel up/down buttons.

3.3.4. The initial value to 255, ensures that the TV Set starts up in the same program number that it was been displayed before turn it off.

3.3.5 If you want to fix other program number proceed as follows set the value according to your necessities by using volume up / down buttons. Use values between 0 to 99. In this way, the new program number appear fixed when you start up the TV set.

Example: If you would like to set starting program number “2”, change from 255 to 2.

3.3.6. Get out from Service Mode (To exit the Service Mode press the stand-by button on the remote control or turn the receiver off with the mains switch).

LED FLASHING CODE

PURPOSE: The led indicates the power mode, occurred I^2C error and On timer

INPUT: Current power mode
- I^2C Errors
- On timer

Processing:
- If in STANDBY mode and On timer inactive then switch LED off.
- If in STANDBY and On timer active set LED to blinking, (switch on and off at 1 Hz with a 50% duty cycle).
- If in POWER-ON mode, switch LED on.
- If an I^2C error occurred, let the LED blink at 1 Hz, 50 % duty cycle. For the blinking times see the Table below.

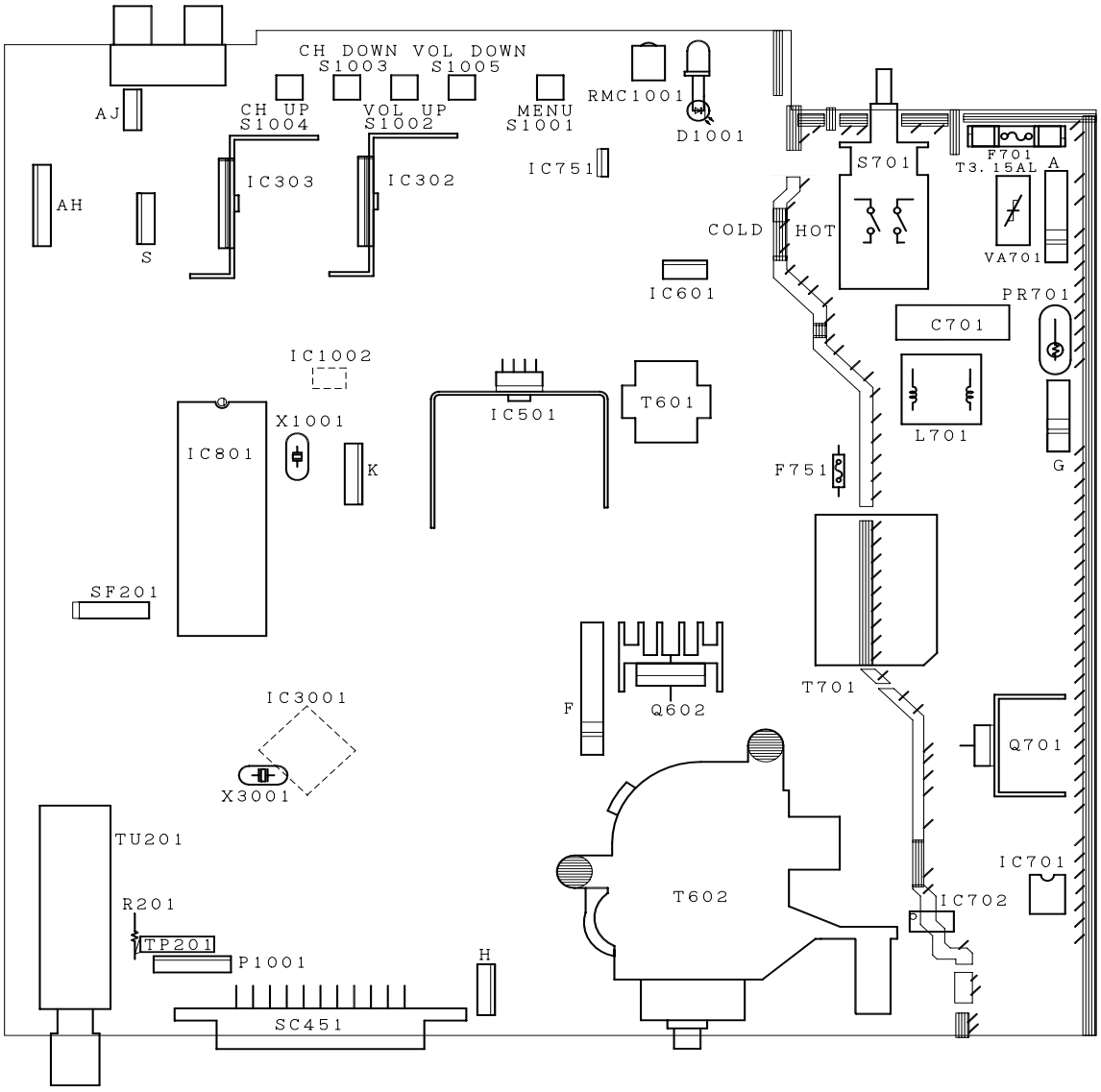
Note: Only when an I^2C error occurs for a number of times, or for a number of seconds, the I^2C error is handled by the system (that is ,only then the set will go to standby, the led starts blinking).

IC/Module Name	Slave Address	Bus Error LED Blinking Time	Remarks	Ref. No.
M24C04, M24C08	A0,A2	2	512x8 EEPROM,1024x8 EEPROM	IC1002
TDA935x/6x/8x	8A	3	Address of internal TV processor	IC801
VTST6HD64 or CTF551	C0 C0	6 6	PLL Tuner	TU201
MSP34x5G	80	5	Multistandard Sound Processor	IC3001

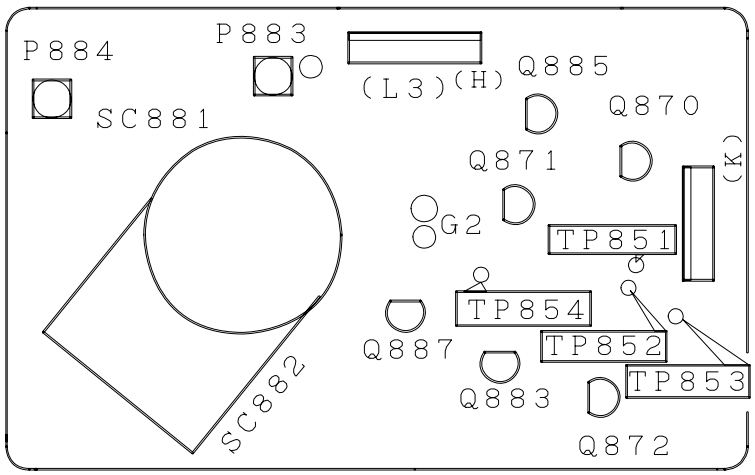
Table Error LED blinking times

CHASSIS LAYOUTS

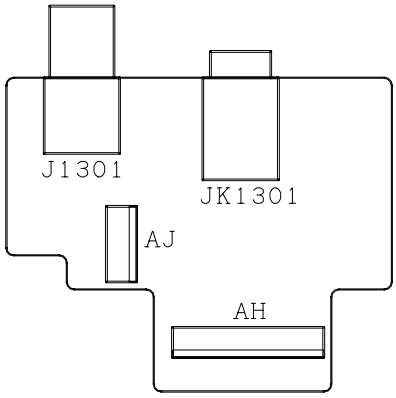
PWB A - Mother unit, F7340



PWB B - CRT unit, F7341

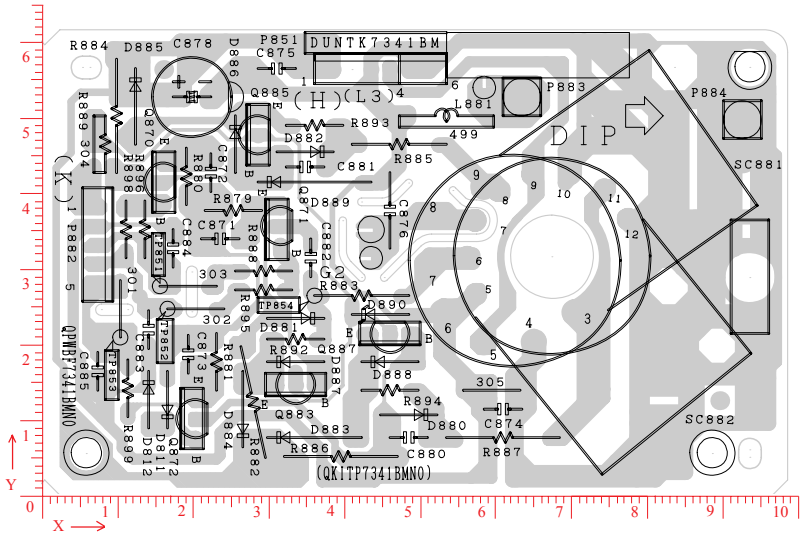


PWB C - Jack unit, FB758

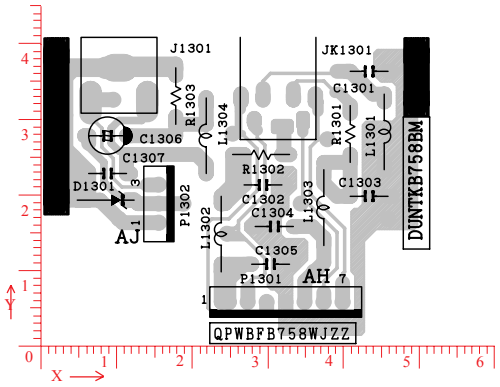


PRINTED WIRING BOARDS

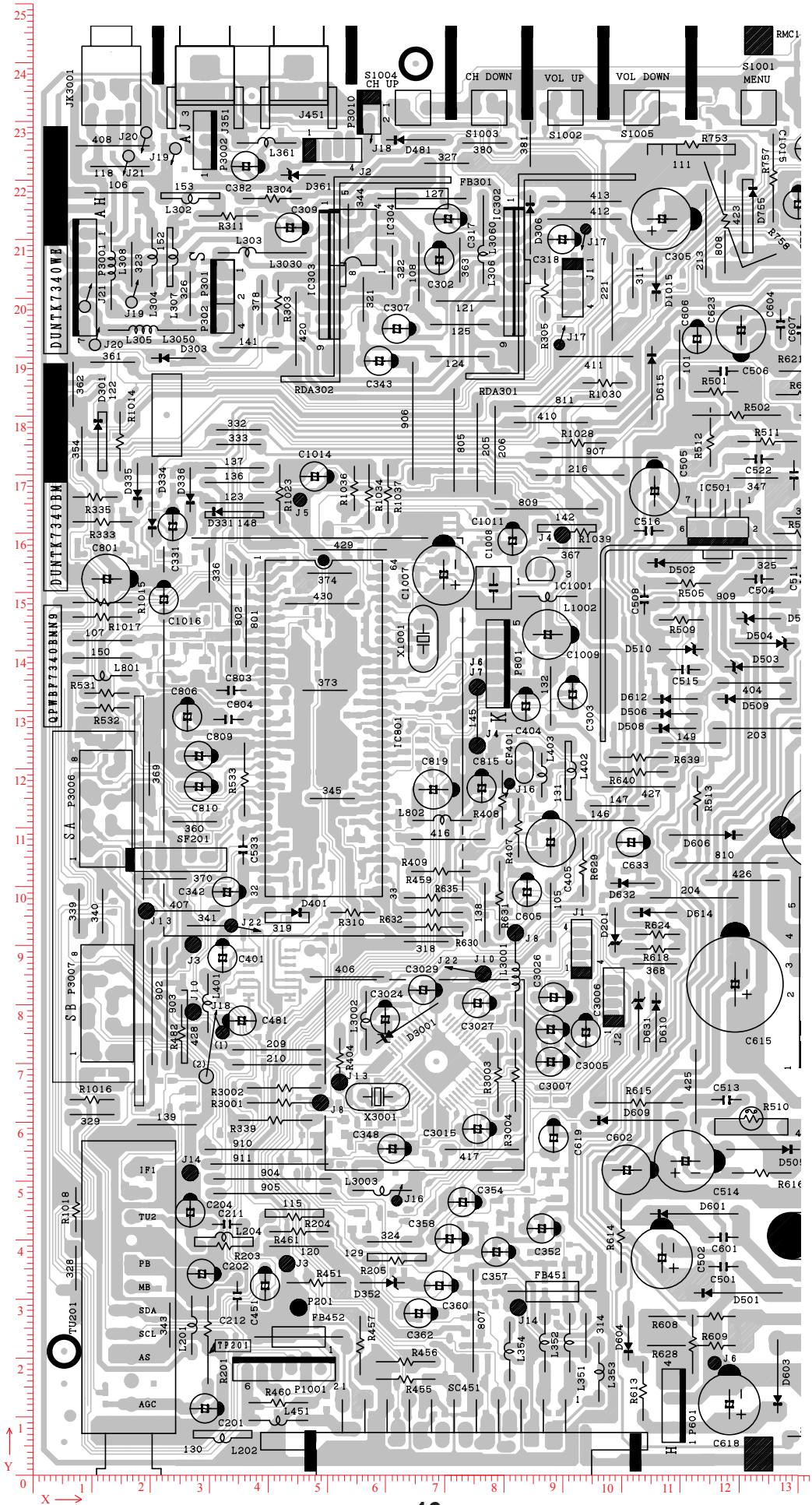
F 7341N0 CRT Unit PWB. Components side.



FB758ZZ Jack Unit PWB. Component side.



F 7340N9 Mother Unit PWB. Component side



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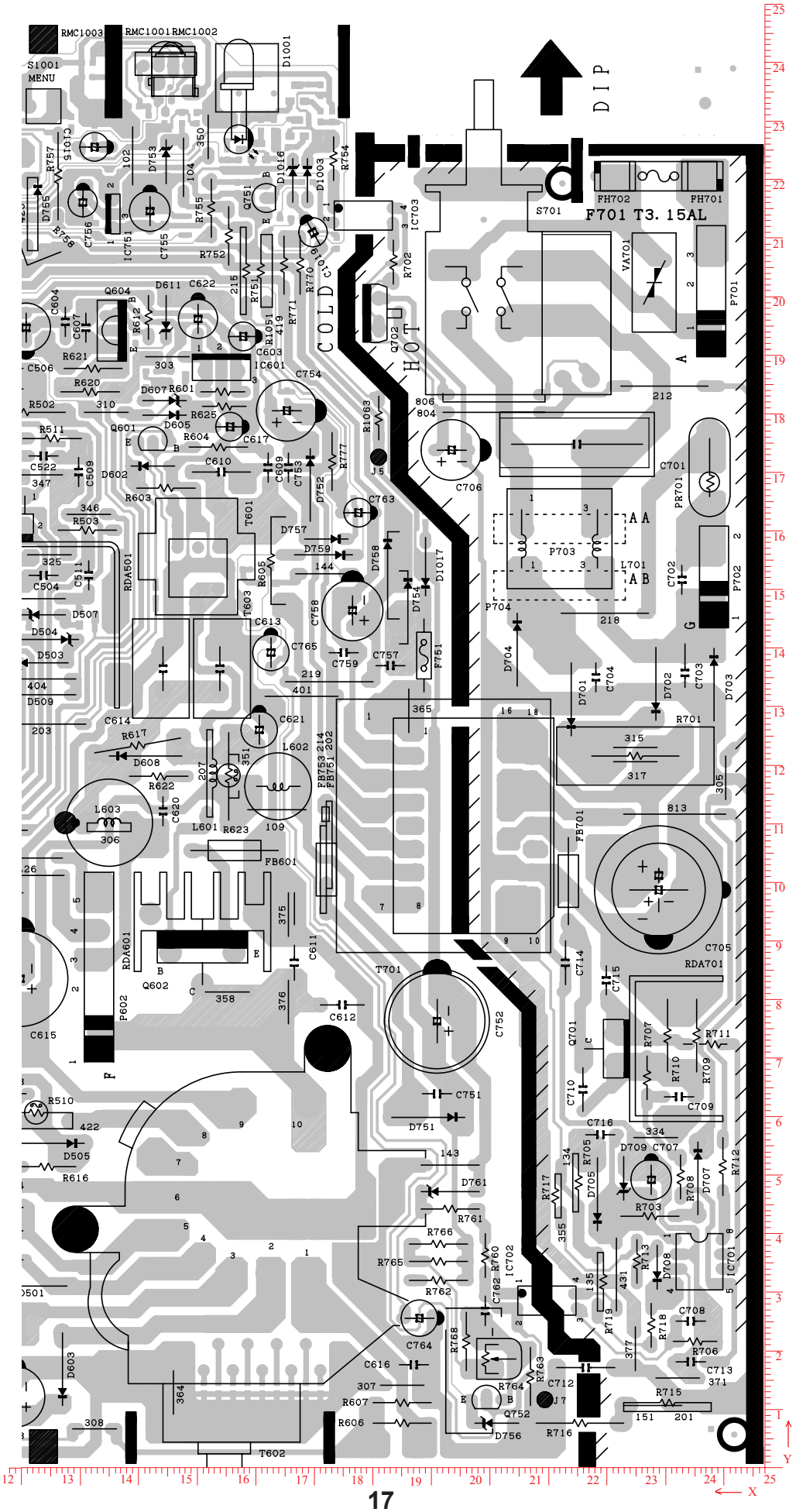
F 7340N9 Mother Unit PWB. Component side


RMC1003
RMC1001
RMC1002
S1001
MENU
D1001
S701
F701 T3. 15AL
FH702
FH701
D I P
COLD
HOT
IC703
IC601
IC751
IC702
IC701
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P702
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PR701
YA701
RDA501
RDA601
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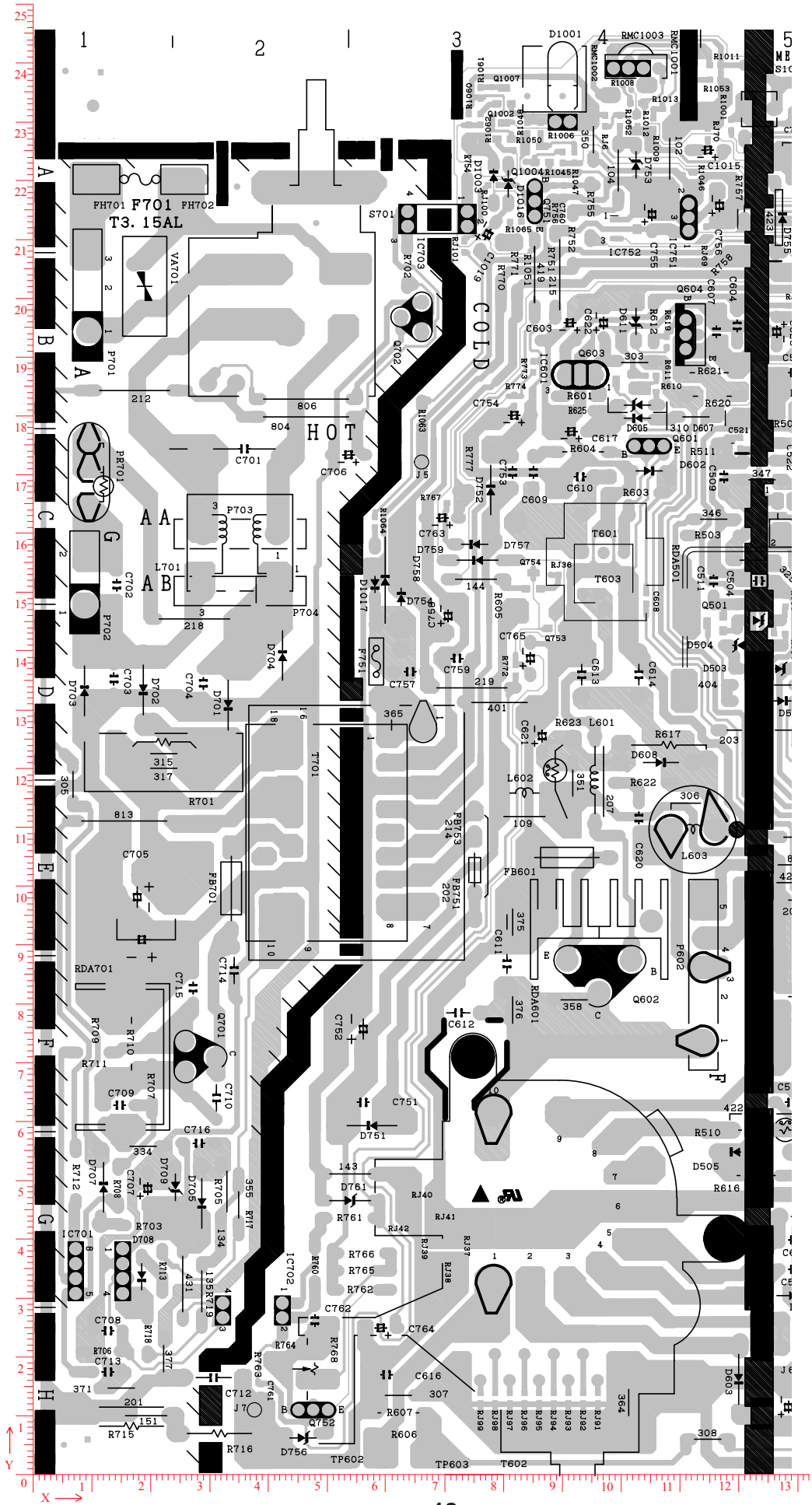
F 7340N9 Mother Unit PWB. Copper side



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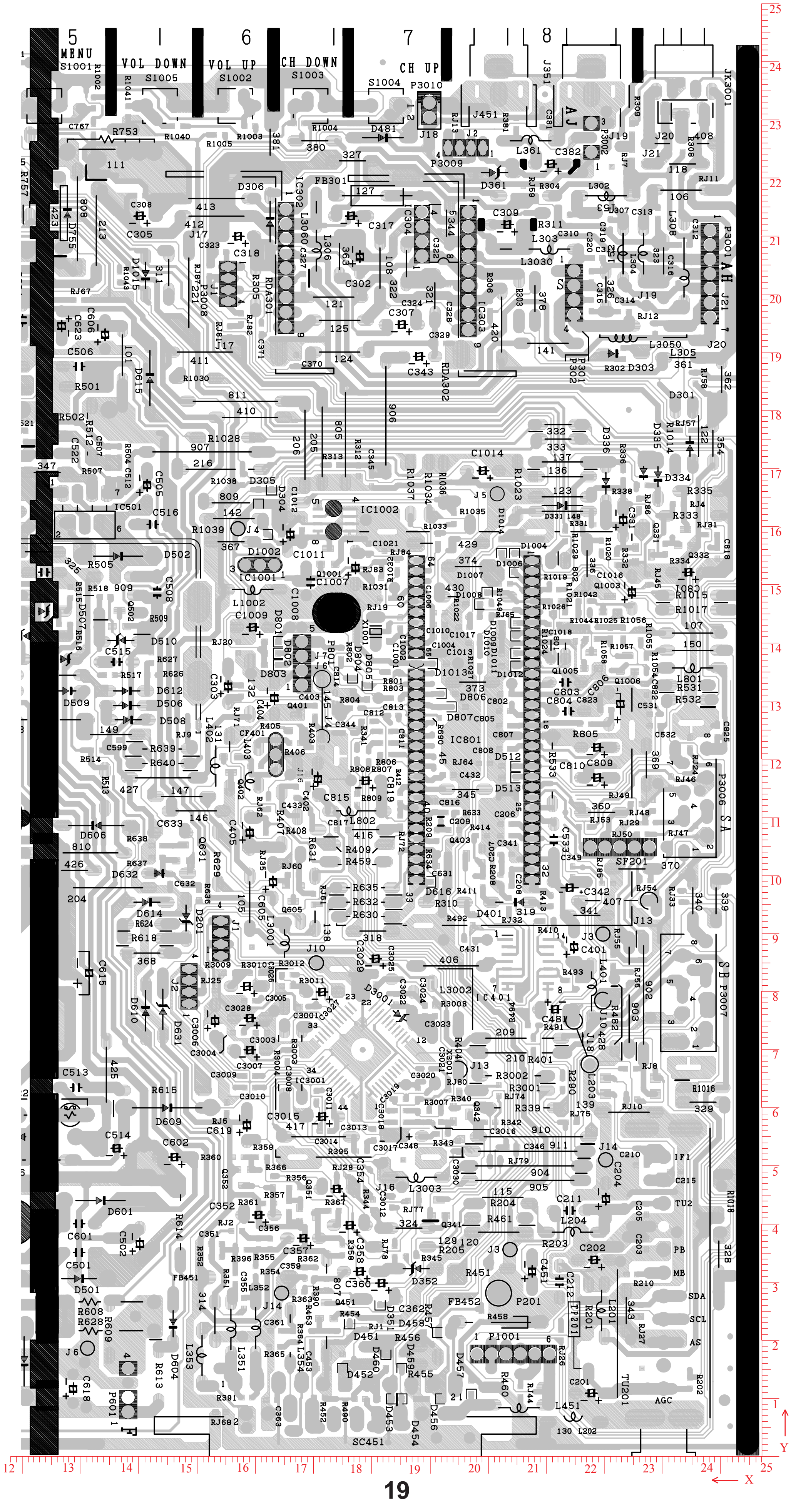
F 7340N9 Mother Unit PWB. Copper side



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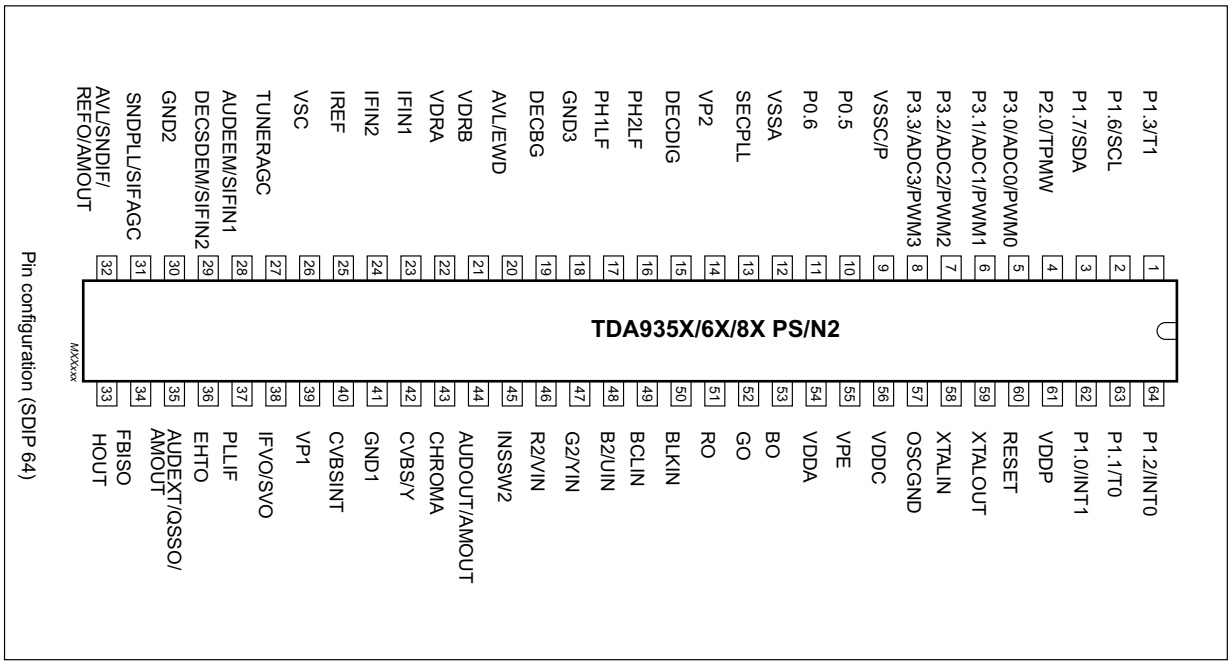
ICs ADDITIONAL INFORMATION

TDA9351 (IC801)

Quick Reference Data

SYMBOL	PARAMETER	MIN.	TYP.	MAX.	UNIT
Supply					
V_P	supply voltages	–	8.0/3.3	–	V
I_P	supply current	–	135/60	–	mA
Input voltages					
$V_{iVIFrms)}$	video IF amplifier sensitivity (RMS value)	–	75	–	µV
$V_{iSIF(rms)}$	QSS sound IF amplifier sensitivity (RMS value)	–	60	–	µV
$V_{iAUDIO(rms)}$	external audio input (RMS value)	–	500	–	mV
$V_{iCVBS(p-p)}$	external CVBS/Y input (peak-to-peak value)	–	1.0	–	V
$V_{iCHROMA(p-p)}$	external chroma input voltage (burst amplitude) (peak-to-peak value)	–	0.3	–	V
$V_{iRGB(p-p)}$	RGB inputs (peak-to-peak value)	–	0.7	–	V
$V_{iYIN(p-p)}$	luminance input signal (peak-to-peak value)	–	1.4	–	V
$V_{iUVIN(p-p)}$	U/V input signal (peak-to-peak value)	–	1.33/1.05	–	V
Output signals					
$V_{o(IFVO)(p-p)}$	demodulated CVBS output (peak-to-peak value)	–	2.5	–	V
$V_{o(QSSO)(rms)}$	sound IF intercarrier output in QSS versions (RMS value)	–	100	–	mV
$V_{o(AMOUT)(rms)}$	demodulated AM sound output in QSS versions (RMS value)	–	500	–	mV
$I_{o(AGCOUT)}$	tuner AGC output current range	0	–	5	mA
$V_{oRGB(p-p)}$	RGB output signal amplitudes (peak-to-peak value)	–	2.0	–	V
I_{oHOUT}	horizontal output current	10	–	–	mA
I_{oVERT}	vertical output current (peak-to-peak value)	1	–	–	mA
I_{oEWD}	EW drive output current	1.2	–	–	mA

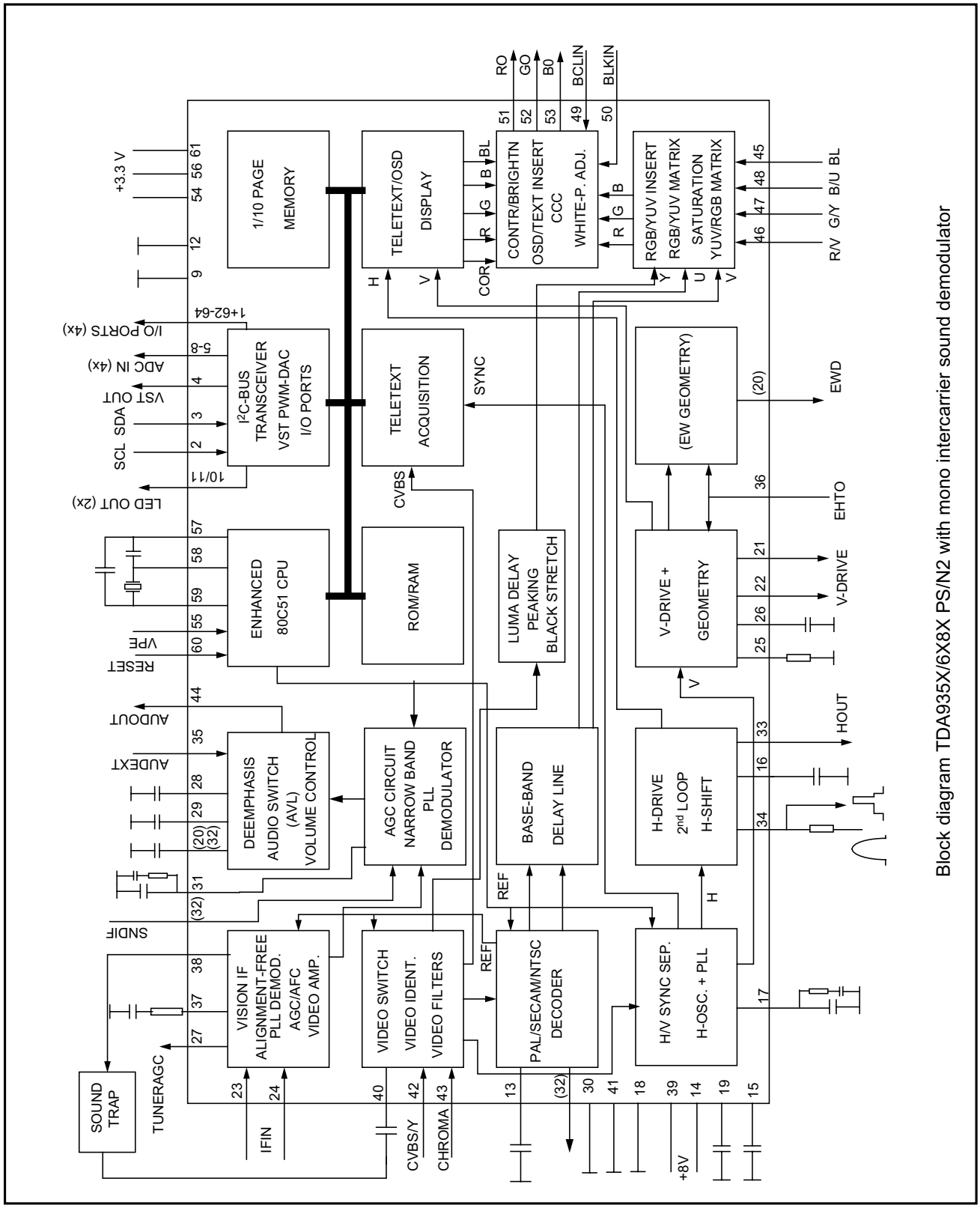
Pinning



Pin configuration (SDIP 64)

TDA9351 (IC801)

Block Diagram



Block diagram TDA935X/6X8X PS/N2 with mono intercarrier sound demodulator

TDA9351 (IC801)

Pinning

SYMBOL	PIN	DESCRIPTION
P1.3/T1	1	port 1.3 or Counter/Timer 1 input
P1.6/SCL	2	port 1.6 or I^2C-bus clock line
P1.7/SDA	3	port 1.7 or I^2C-bus data line
P2.0/TPWM	4	port 2.0 or Tuning PWM output
P3.0/ADC0/PWM0	5	port 3.0 or ADC0 input or PWM0 output
P3.1/ADC1/PWM1	6	port 3.1 or ADC1 input or PWM1 output
P3.2/ADC2/PWM2	7	port 3.2 or ADC2 input or PWM2 output
P3.3/ADC3/PWM3	8	port 3.3 or ADC3 input or PWM3 output
VSSC/P	9	digital ground for μ-Controller core and periphery
P0.5	10	port 0.5 (8 mA current sinking capability for direct drive of LEDs)
P0.6	11	port 0.6 (8 mA current sinking capability for direct drive of LEDs)
VSSA	12	analog ground of Teletext decoder and digital ground of TV-processor
SECPLL	13	SECAM PLL decoupling
VP2	14	2nd supply voltage TV-processor (+8V)
DECDIG	15	decoupling digital supply of TV-processor
PH2LF	16	phase-2 filter
PH1LF	17	phase-1 filter
GND3	18	ground 3 for TV-processor
DECBG	19	bandgap decoupling
AVL/EWD (1)	20	Automatic Volume Levelling /East-West drive output
VDRB	21	vertical drive B output
VDRA	22	vertical drive A output
IFIN1	23	IF input 1
IFIN2	24	IF input 2
IREF	25	reference current input
VSC	26	vertical sawtooth capacitor
TUNERAGC	27	tuner AGC output
AUDEEM/SIFIN1(1)	28	audio deemphasis or SIF input 1
DECSDEM/SIFIN2(1)	29	decoupling sound demodulator or SIF input 2
GND2	30	ground 2 for TV processor
SNDPLL/SIFAGC(1)	31	narrow band PLL filter /AGC sound IF
AVL/SNDIF/REF0/ AMOUT(1)	32	Automatic Volume Levelling / sound IF input / subcarrier reference output /AM output (non controlled)
HOUT	33	horizontal output
FBISO	34	flyback input/sandcastle output
AUDEXT/ QSSO/AMOUT(1)	35	external audio input /QSS intercarrier out /AM audio output (non controlled)
EHTO	36	EHT/overvoltage protection input
PLLIF	37	IF-PLL loop filter
IFVO/SVO	38	IF video output / selected CVBS output
VP1	39	main supply voltage TV-processor (+8 V)
CVBSINT	40	internal CVBS input
GND1	41	ground 1 for TV-processor
CVBS/Y	42	external CVBS/Y input
CHROMA	43	chrominance input (SVHS)
AUDOUT /AMOUT(1)	44	audio output /AM audio output (volume controlled)

TDA9351 (IC801)

SYMBOL	PIN	DESCRIPTION
INSSW2	45	2nd RGB / YUV insertion input
R2/VIN	46	2nd R input / V (R-Y) input
G2/YIN	47	2nd G input / Y input
B2/UIN	48	2nd B input / U (B-Y) input
BCLIN	49	beam current limiter input / (V-guard input, note 2)
BLKIN	50	black current input / (V-guard input, note 2)
RO	51	Red output
GO	52	Green output
BO	53	Blue output
VDDA	54	analog supply of Teletext decoder and digital supply of TV-processor (3.3 V)
VPE	55	OTP Programming Voltage
VDDC	56	digital supply to core (3.3 V)
OSCGND	57	oscillator ground supply
XTALIN	58	crystal oscillator input
XTALOUT	59	crystal oscillator output
RESET	60	reset
VDDP	61	digital supply to periphery (+3.3 V)
P1.0/INT1	62	port 1.0 or external interrupt 1 input
P1.1/T0	63	port 1.1 or Counter/Timer 0 input
P1.2/INT0	64	port 1.2 or external interrupt 0 input

Note

1. The function of pin 20, 28, 29, 31, 32, 35 and 44 is dependent on the IC version (mono intercarrier FM demodulator / QSS IF amplifier and East-West output or not) and on some software control bits. The valid combinations are given in table 1.
2. The vertical guard function can be controlled via pin 49 or pin 50. The selection is made by means of the IVG bit in subaddress 2BH.

Table 1 Pin functions for various versions

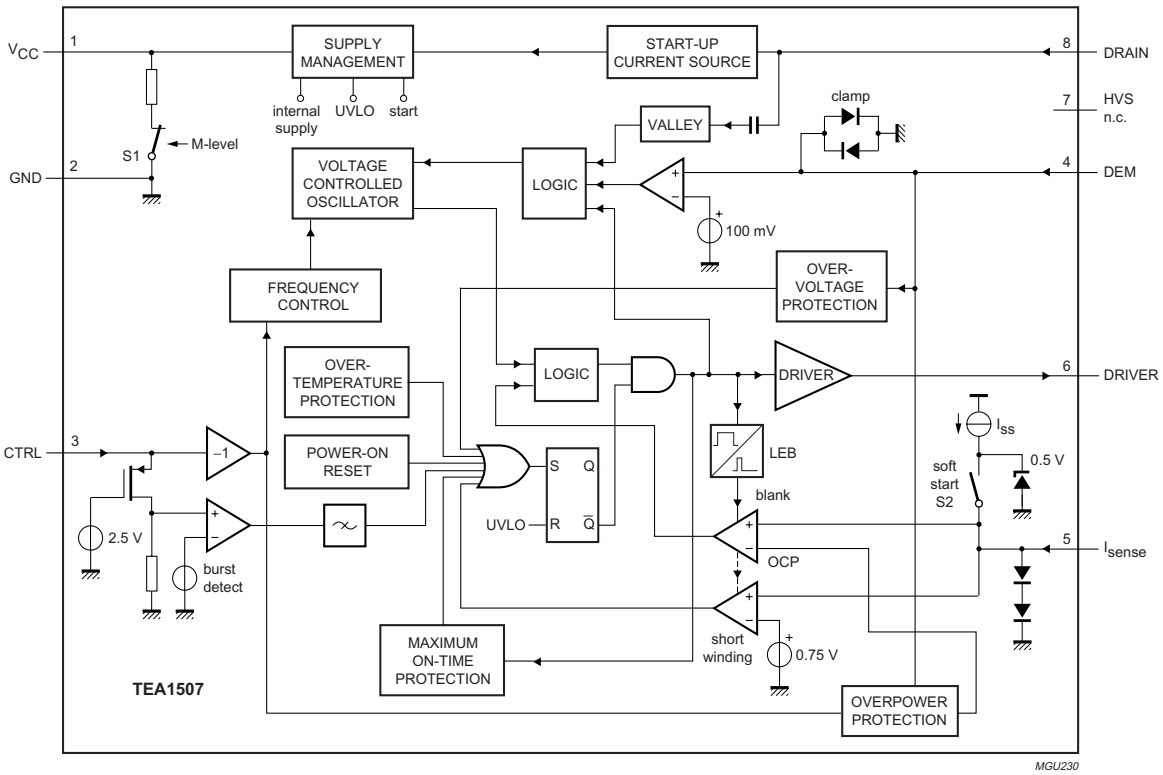
IC version	FM-PLL version				QSS version					
East-West Y/N	N		Y		N			Y		
CMB1/CMB0 bits	00	01/10/11	00	01/10/11	00	01/10/11		00	01/10/11	
AM bit	–	–	–	–	–	0	1	–	0	1
Pin 20	AVL		EWD		AVL			EWD		
Pin 28	AUDEEM				SIFIN1					
Pin 29	DECSDEM				SIFIN2					
Pin 31	SNDPLL				SIFAGC					
Pin 32	SNDIF(1)	REFO(2)	AVL/SNDIF(1)	REFO(2)	AMOUT	REFO(2)		AMOUT	REFO(2)	
Pin 35	AUDEXT				AUDEXT	QSSO	AMOUT	AUDEXT	QSSO	AMOUT
Pin 44	AUDOUT				controlled AM or audio out					

Note

1. When additional (external) selectivity is required for FM-PLL system pin 32 can be used as sound IF input. This function is selected by means of SIF bit in subaddress 28H.
2. The reference output signal is only available for the CMB1/CMB0 setting of 0/1. For the other settings this pin is a switch output (see also table 68).

TEA1507 (IC701)

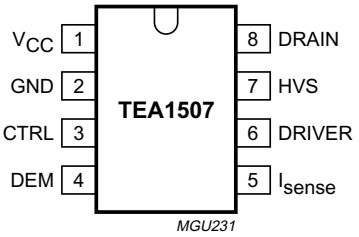
Block Diagram



Block diagram.

Pinning

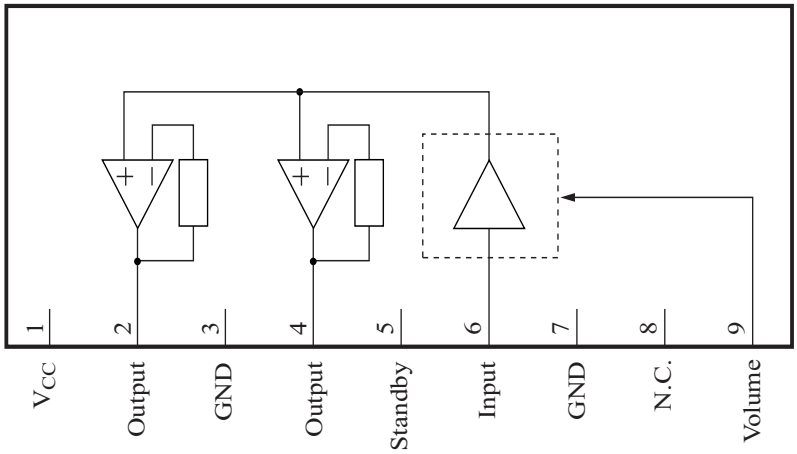
SYMBOL	PIN	DESCRIPTION
V_{CC}	1	supply voltage
GND	2	ground
CTRL	3	control input
DEM	4	input from auxiliary winding for demagnetization timing, OVP and OPP
I_{sense}	5	programmable current sense input
DRIVER	6	gate driver output
HVS	7	high voltage safety spacer, not connected
DRAIN	8	drain of external MOS switch, input for start-up current and valley sensing



Pin configuration.

AN7523 (IC302, IC303)

Block Diagram



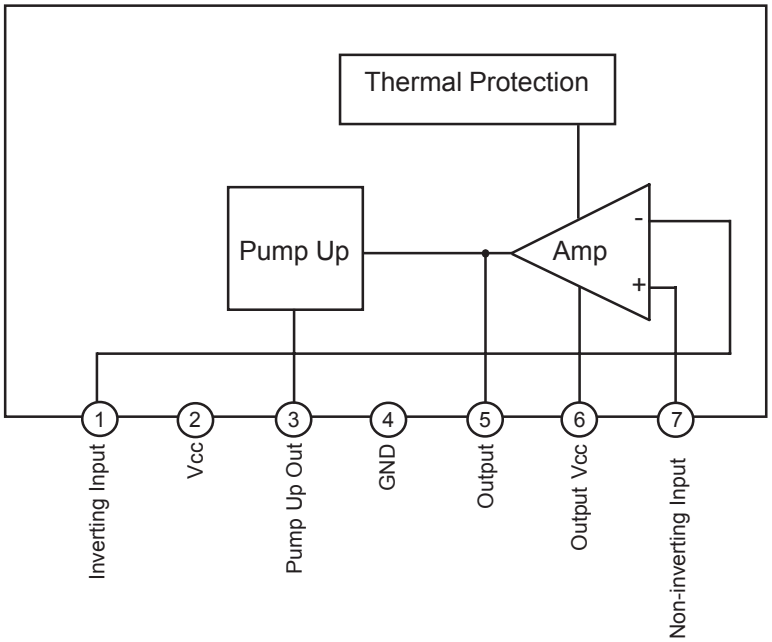
Pin Descriptions

Pin No.	Description
1	Vcc
2	Ch Output (+)
3	GND
4	Ch Output (-)
5	Standby
6	Ch Input
7	GND
8	N.C
9	Volume

Note: Do not apply voltage or current to NC pin from outside

AN5522 (IC501)

Block Diagram

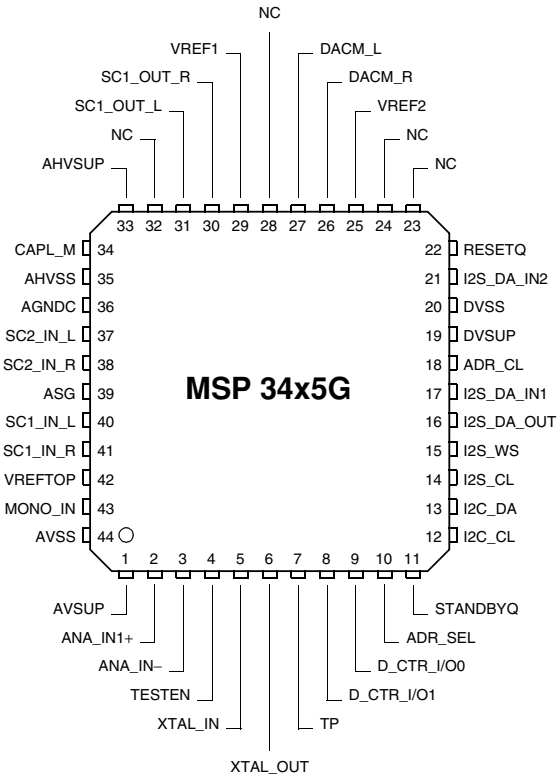


Pin Descriptions

Pin No.	Pin Name
1	Inverting Input
2	Power Supply
3	Pump-up Output
4	GND
5	Vertical Output
6	Vertical Output Power Supply
7	Non-inverting Input

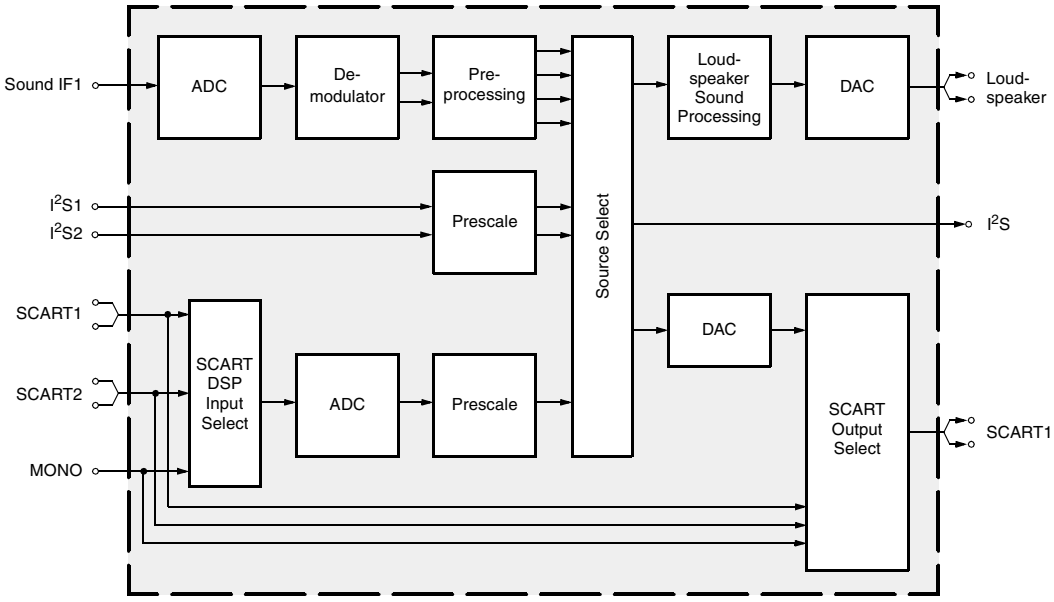
MSP34x5G (IC3001)

Pinning



PMQFP44 package

Block Diagram



Simplified functional block diagram of MSP 34x5G

SCHEMATIC DIAGRAMS

Description

Safety note:
1. Disconnect the AC plug from the AC outlet before replacing parts.

2. Semiconductor heat sinks should be regarded as potential shock hazards when the chassis is operating.

Important safety note:

Parts marked with « ⚠ » ( ) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

CAUTION
This circuit diagram is original one, therefore there may be slight difference from yours.

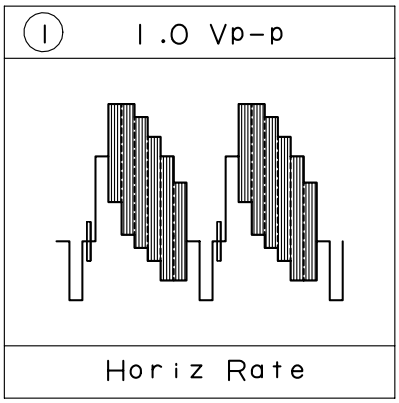
Note:

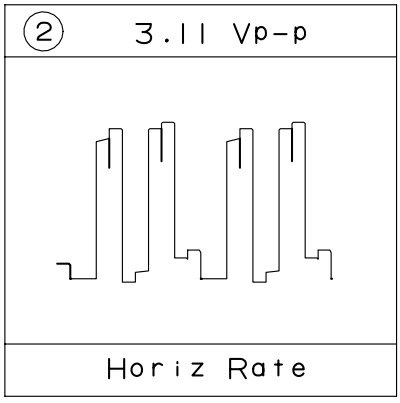
1. The unit of resistance «ohm»is omitted (K=1000 ohms. M= Megaohm).
2. All resistors are 1/16 watt. unless otherwise noted.
3. All capacitors are μF, unless otherwise noted (P= μμF).
4. The capacitor with Part No. RC-FZ9XXXBMNJ is designed to with stand 63V.
5. The capacitor with Part No. RC-FZ4XXXBMNJ is designed to with stand 50V.

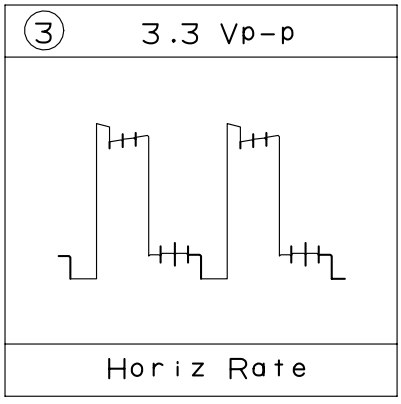
Service precaution:
The area enclosed by this line is directly (⊢•–•–) connected with AC mains voltage.
When servicing the area, connect an insulating transformer between TV receiver and AC line to eliminate hazard of electric shock.

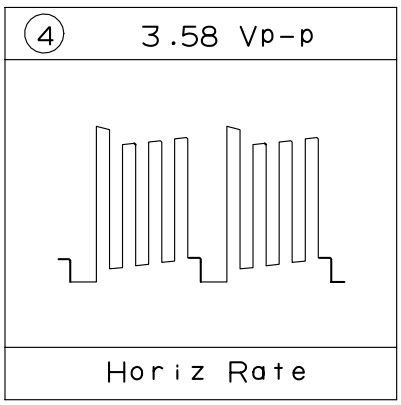
Waveform measurement condition:
Colour bar generator signal of 70 dB from RF input.

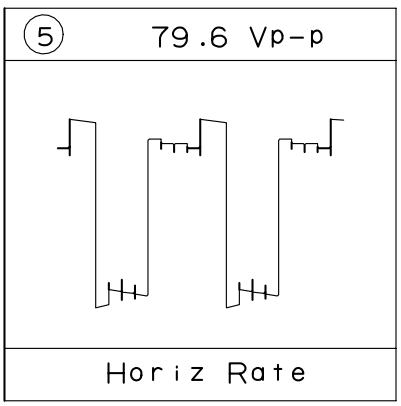
Waveforms

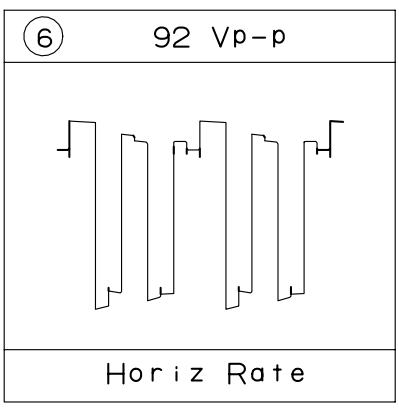




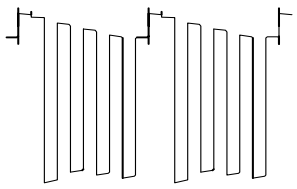






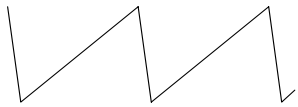


⑦ 90 Vp-p



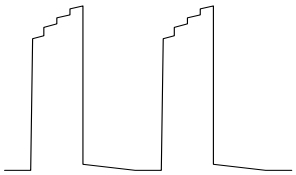
Horiz Rate

⑧ 3.14 Vp-p



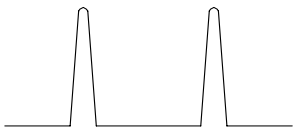
Vert Rate

⑨ 2.58 Vp-p



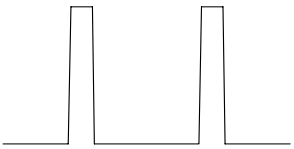
Horiz Rate

⑩ 132 Vp-p



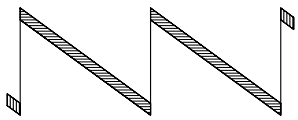
Horiz Rate

⑪ 8.8 Vp-p



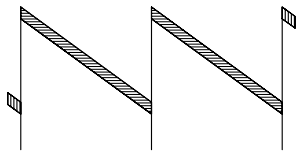
Horiz Rate

⑫ 0.14 Vp-p



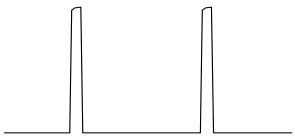
Vert Rate

⑬ 0.192 Vp-p



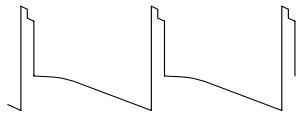
Vert Rate

⑭ 0.52 Vp-p



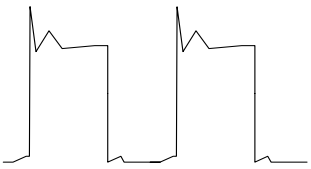
Vert Rate

⑮ 53.8 Vp-p



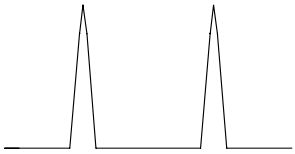
Vert Rate

⑯ 120 Vp-p



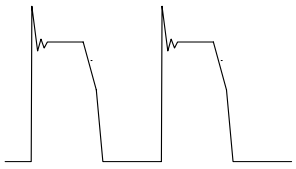
Horiz Rate

⑰ 1055 Vp-p



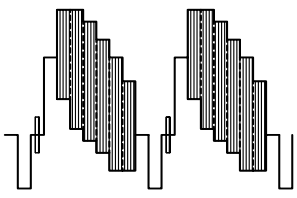
Horiz Rate

⑱ 612 Vp-p



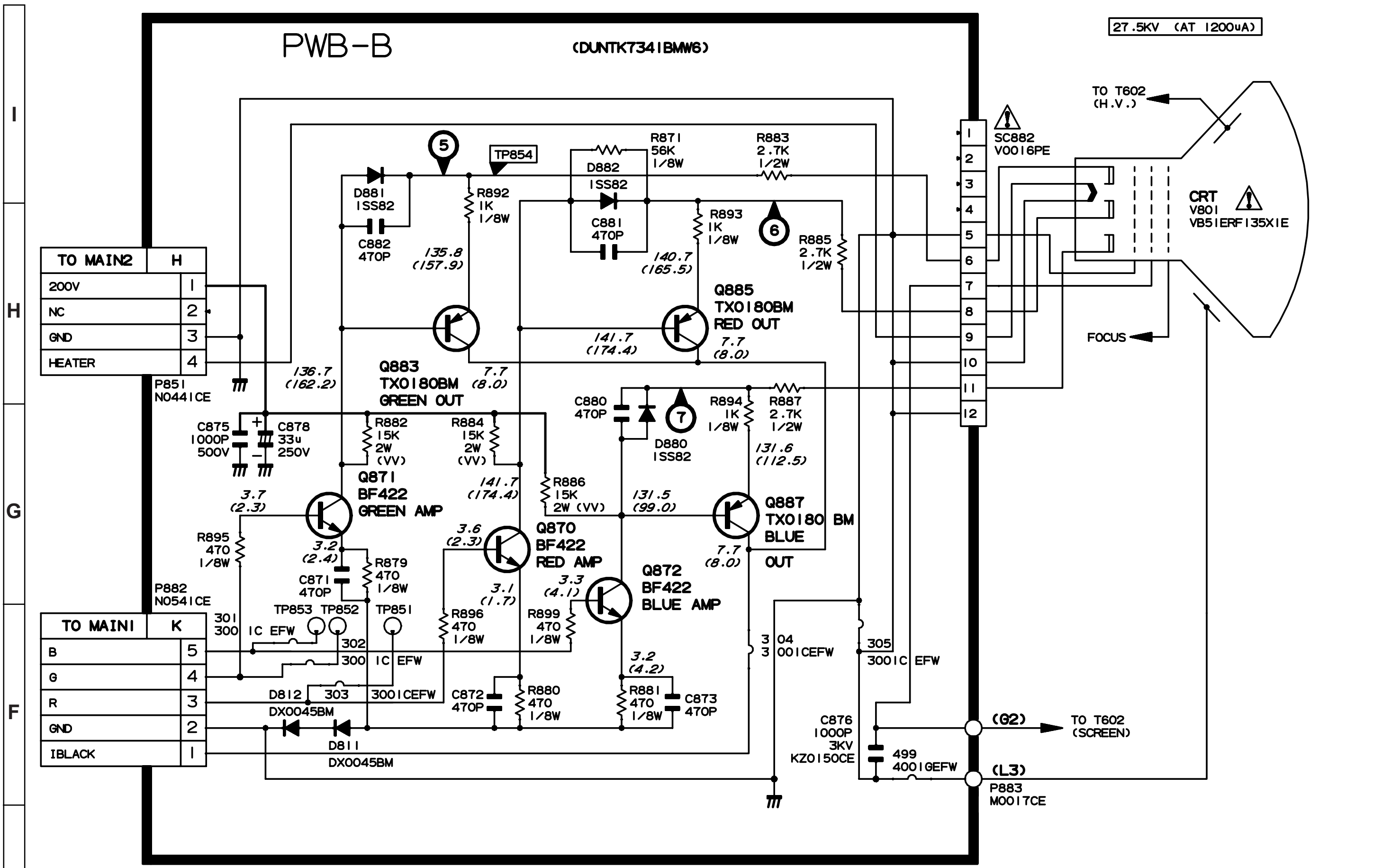
Vert Rate

⑲ 2.0 Vp-p

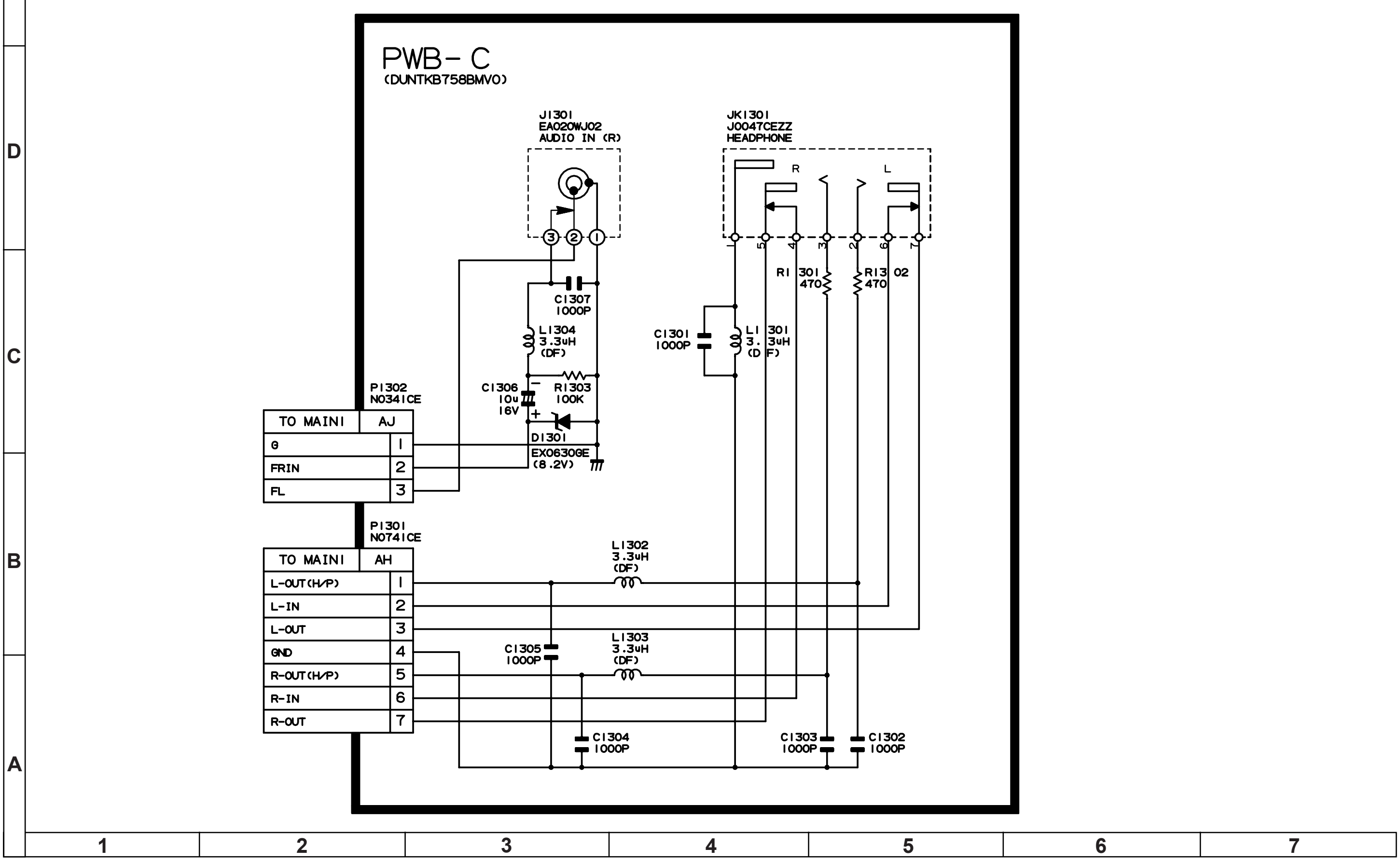


Horiz Rate

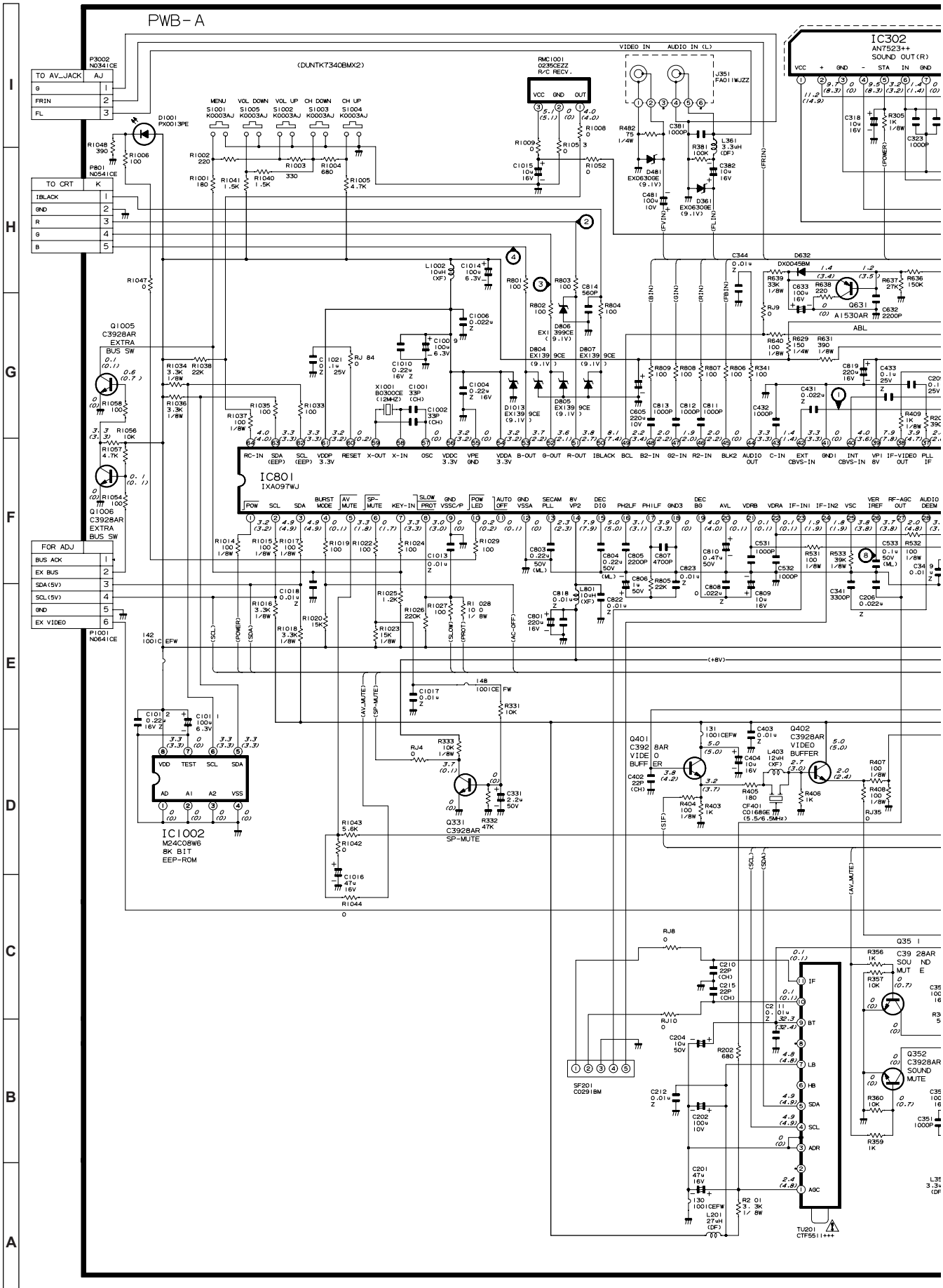
Schematic Diagram of CRT Unit (F7341N0)



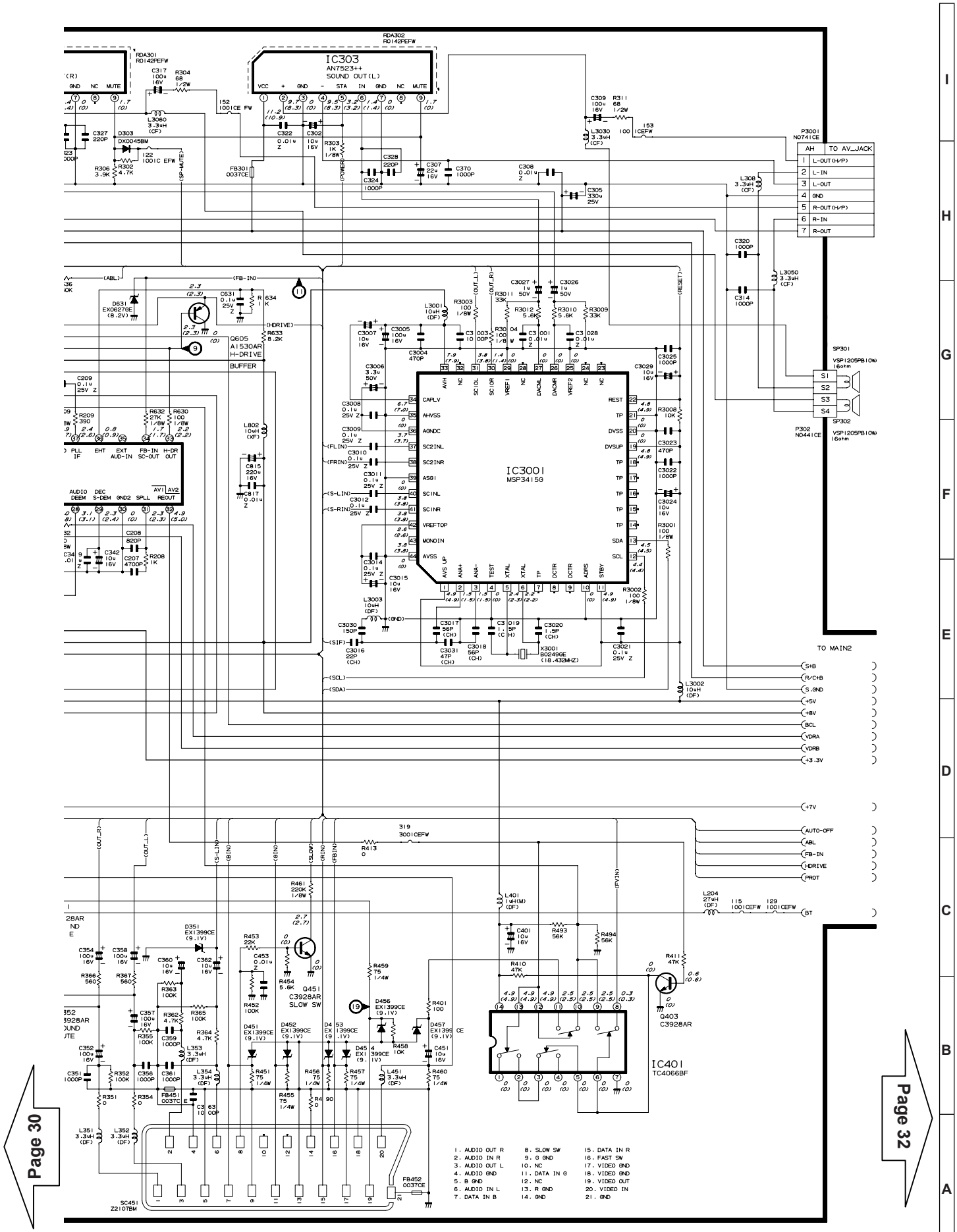
Schematic Diagram of Jack Unit (FB758ZZ)



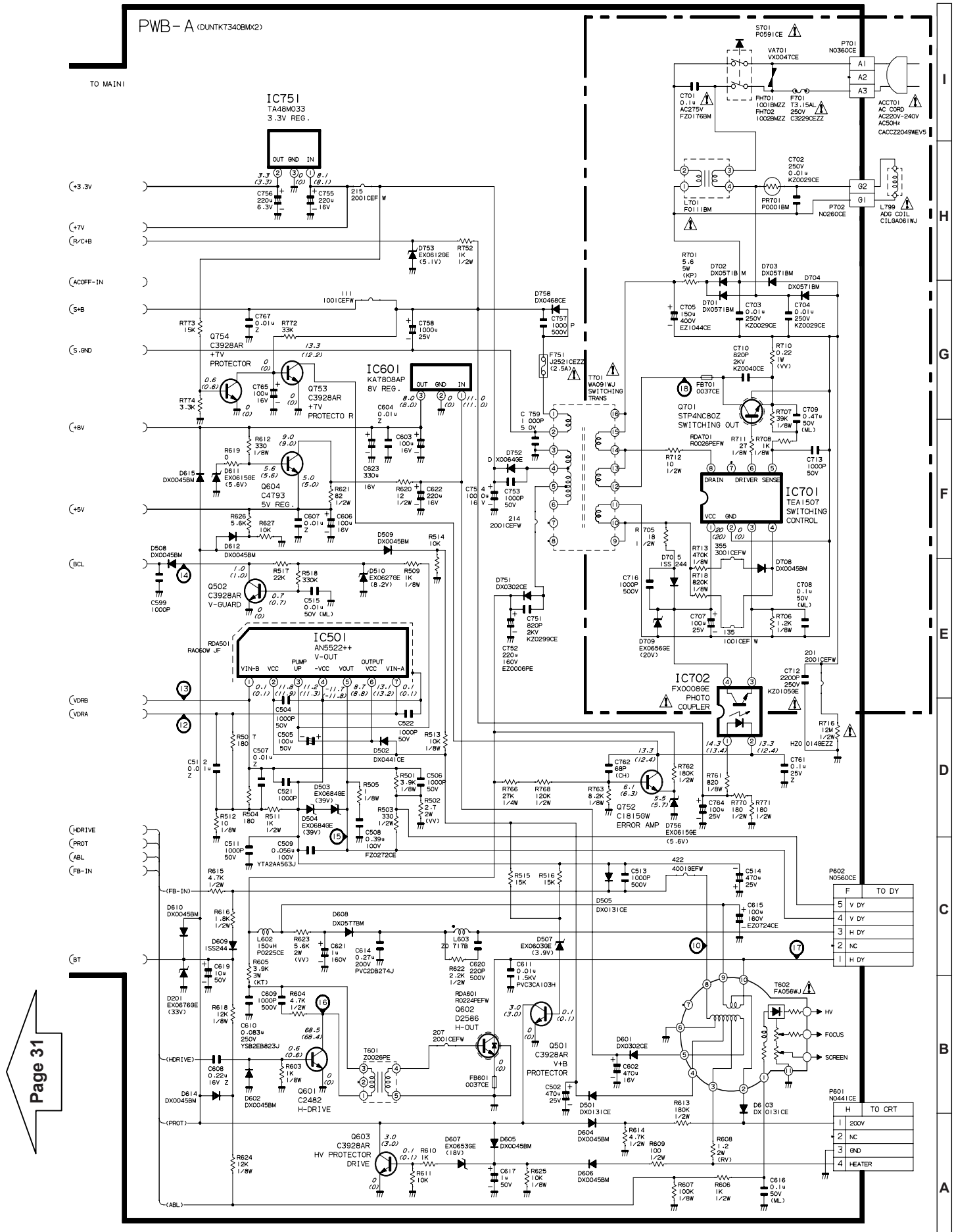
Schematic Diagram of Mother Unit (F7340N9)



Schematic Diagram of Mother Unit (F7340N9)

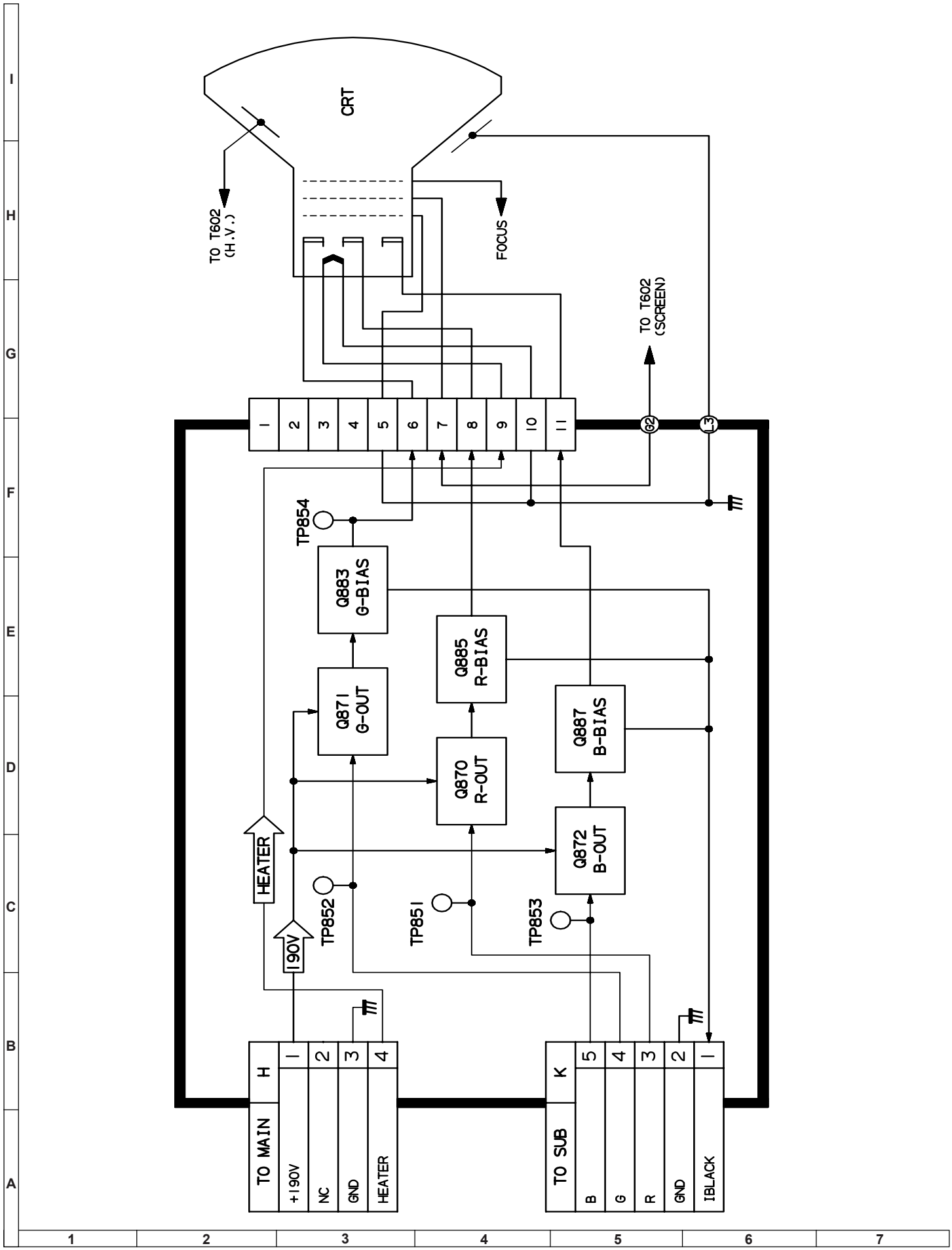


Schematic Diagram of Mother Unit (F7340N9)

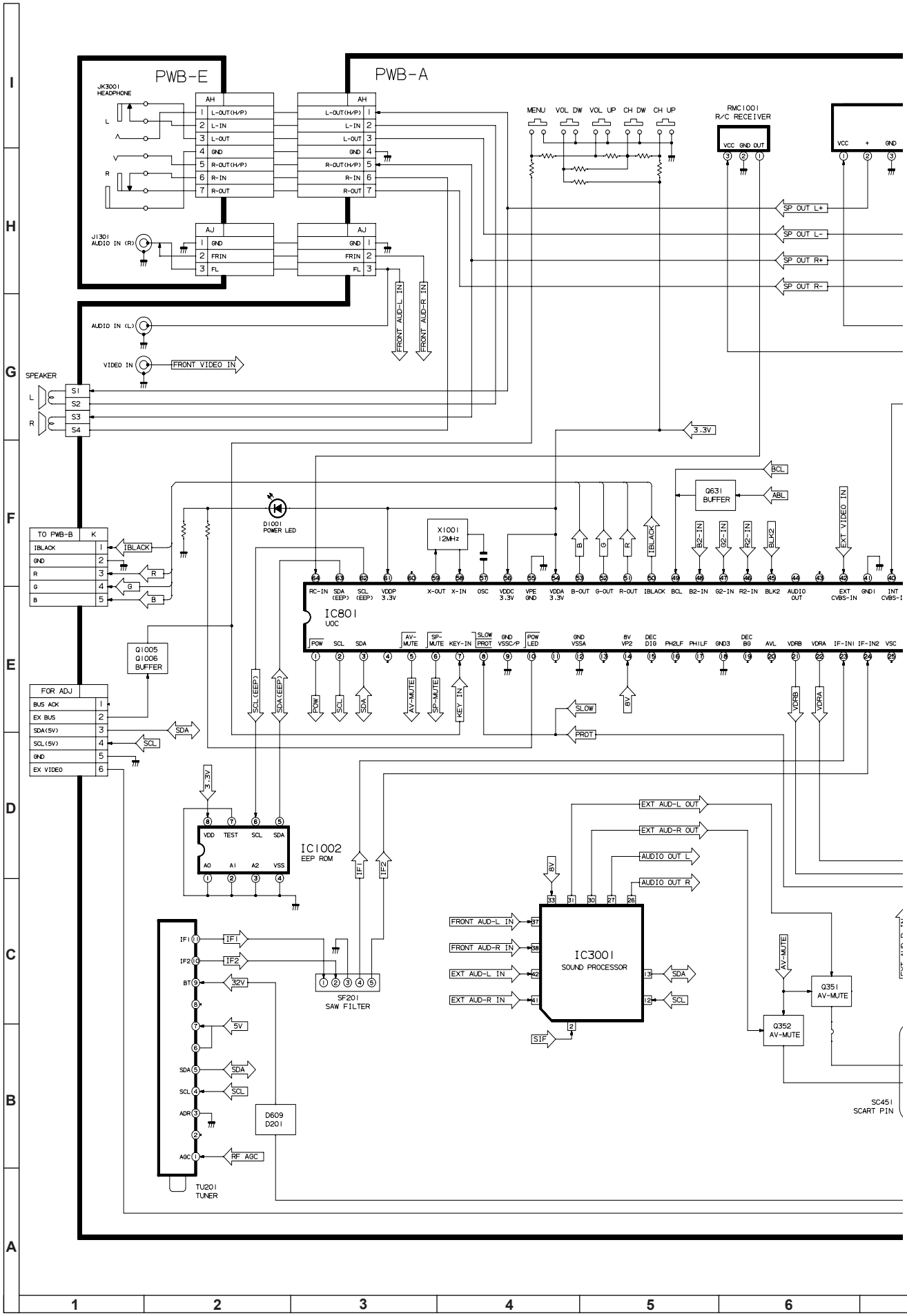


BLOCK DIAGRAMS

CRT Unit, F7341



Mother unit, F7340



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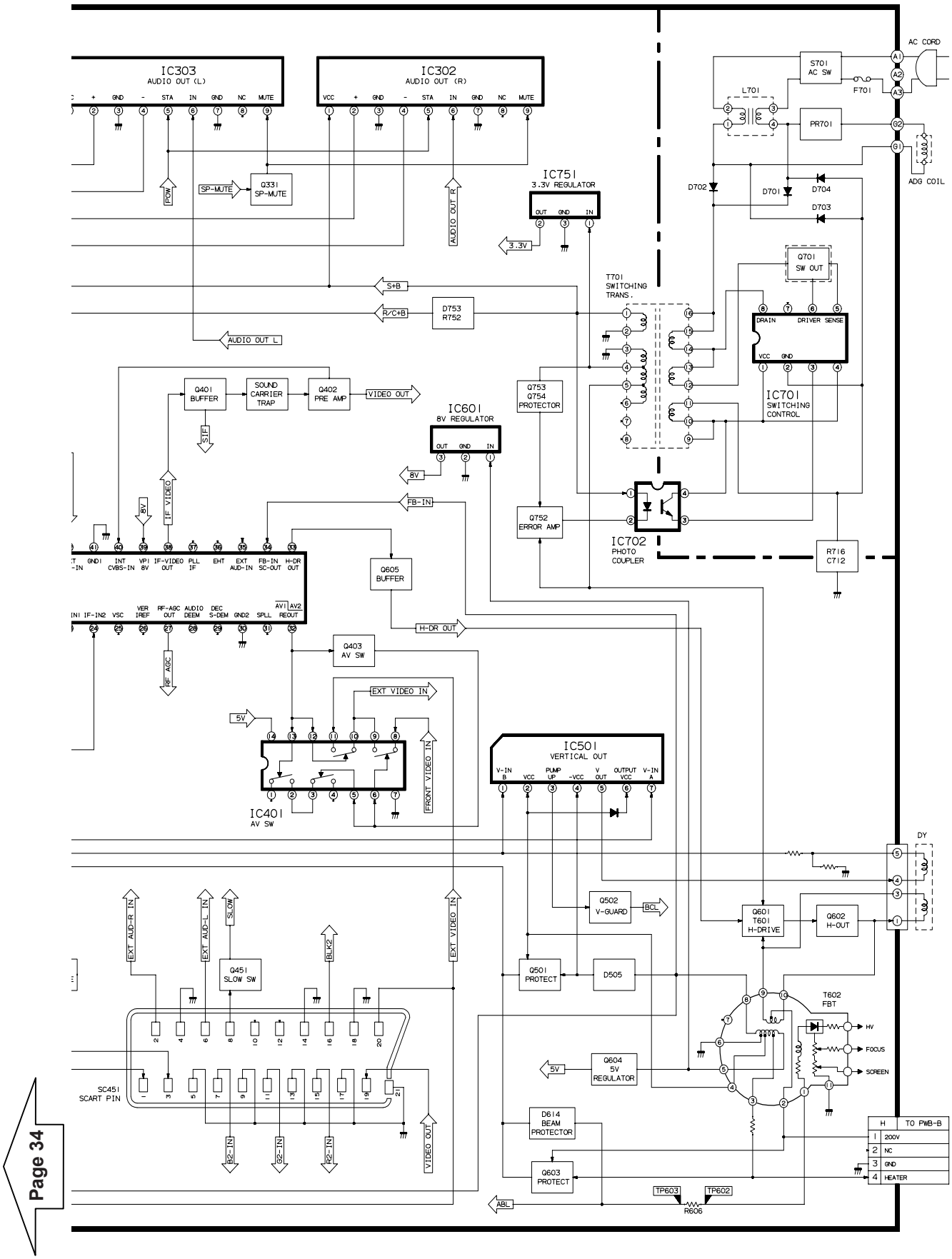
Mother unit, F7340



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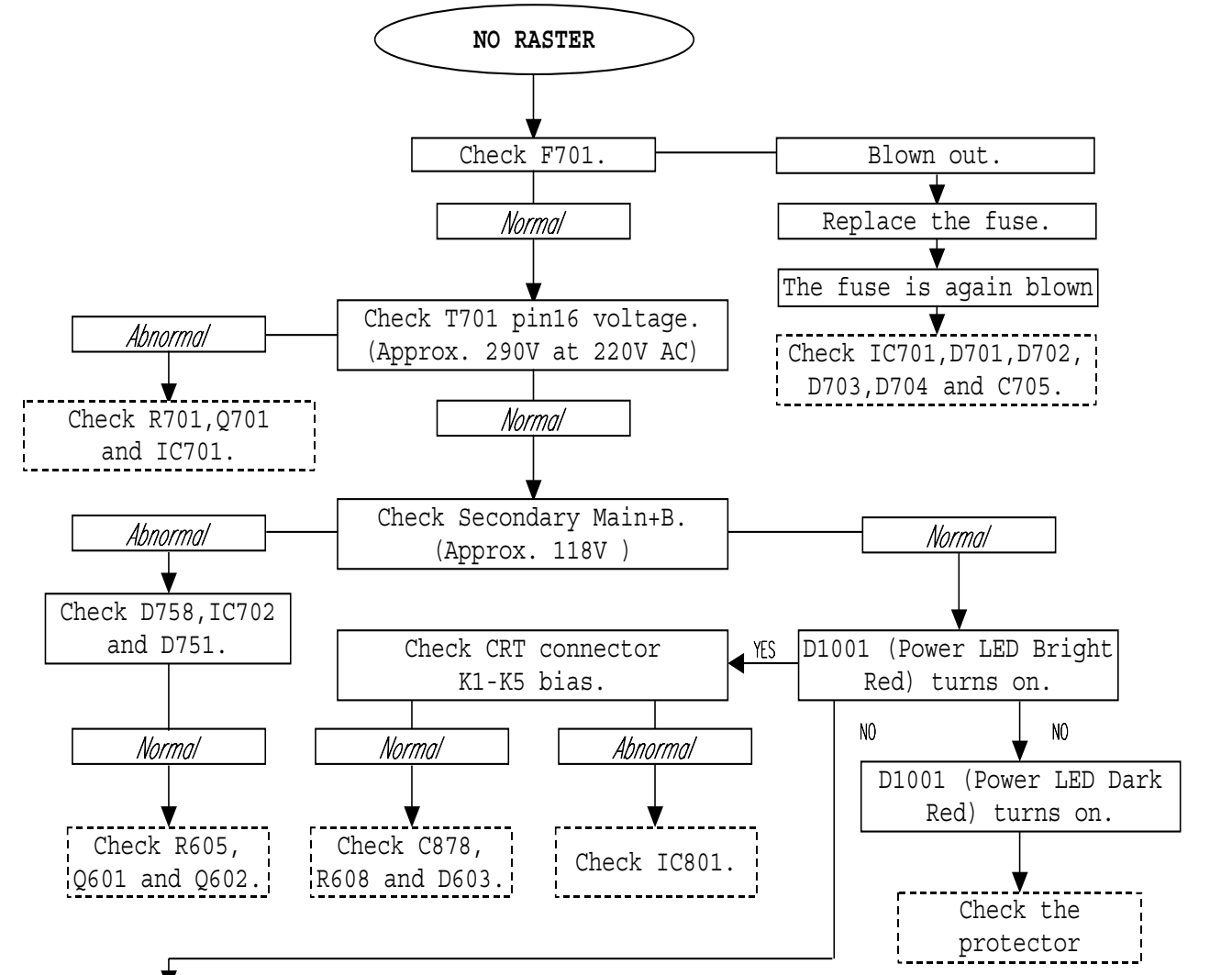
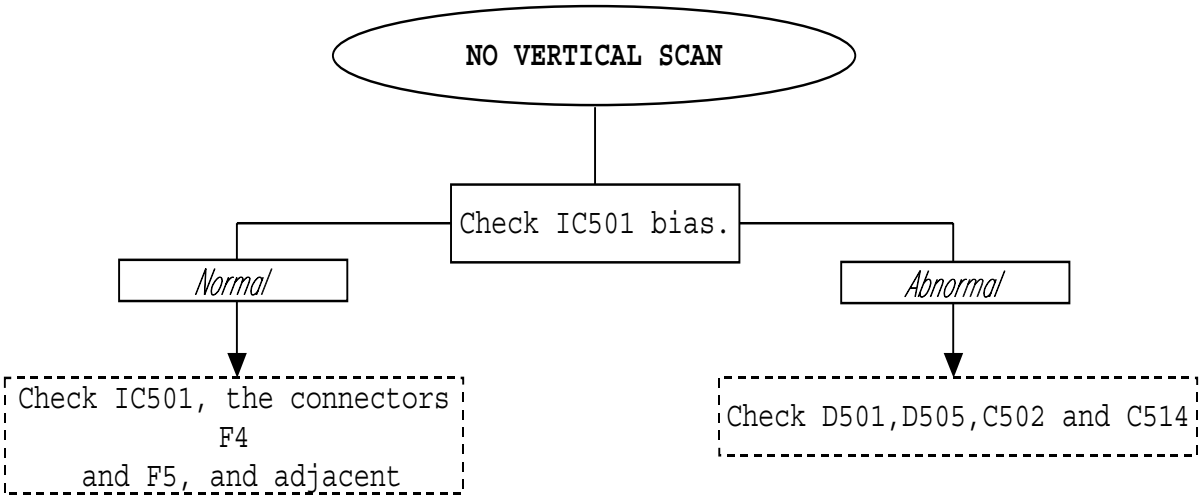
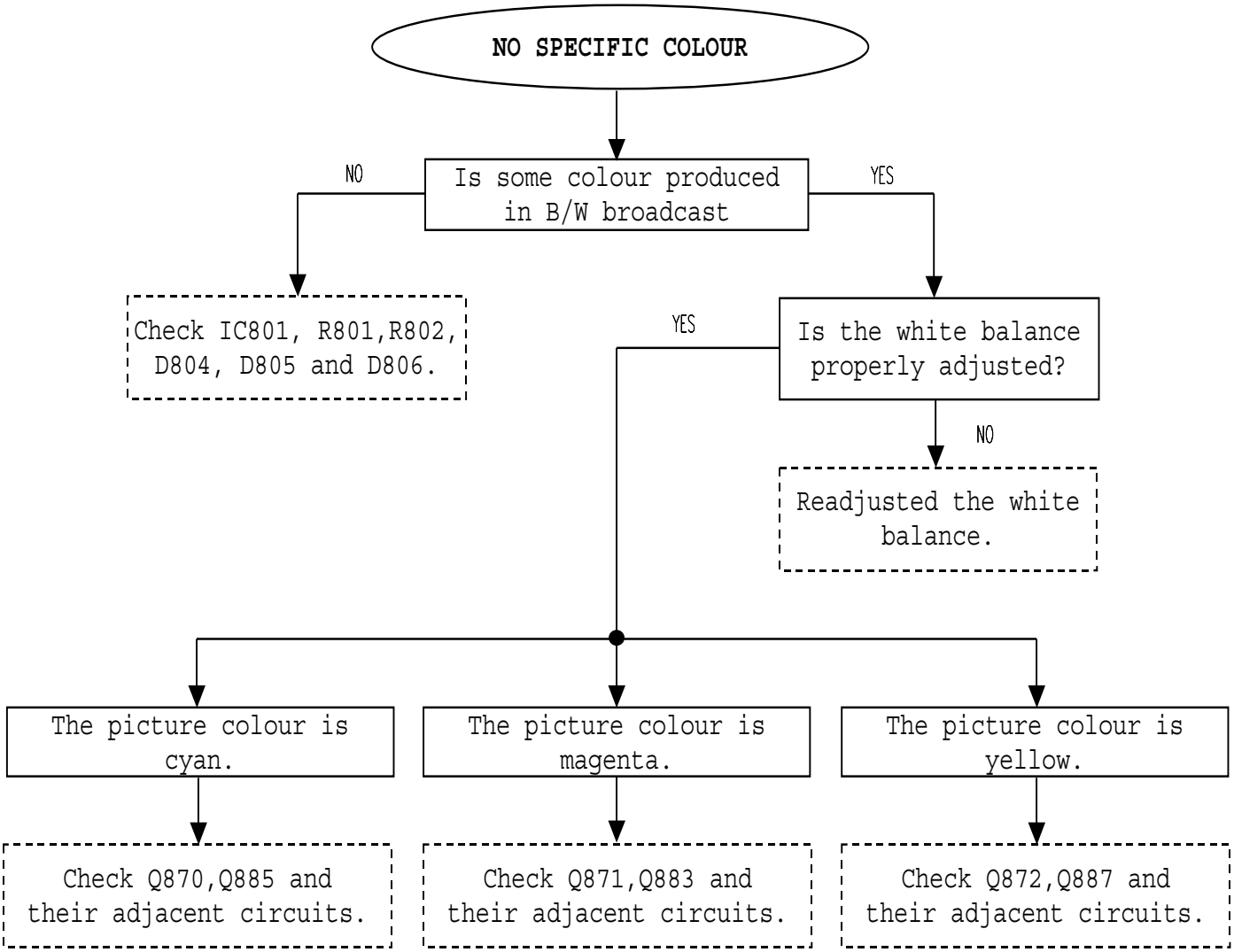
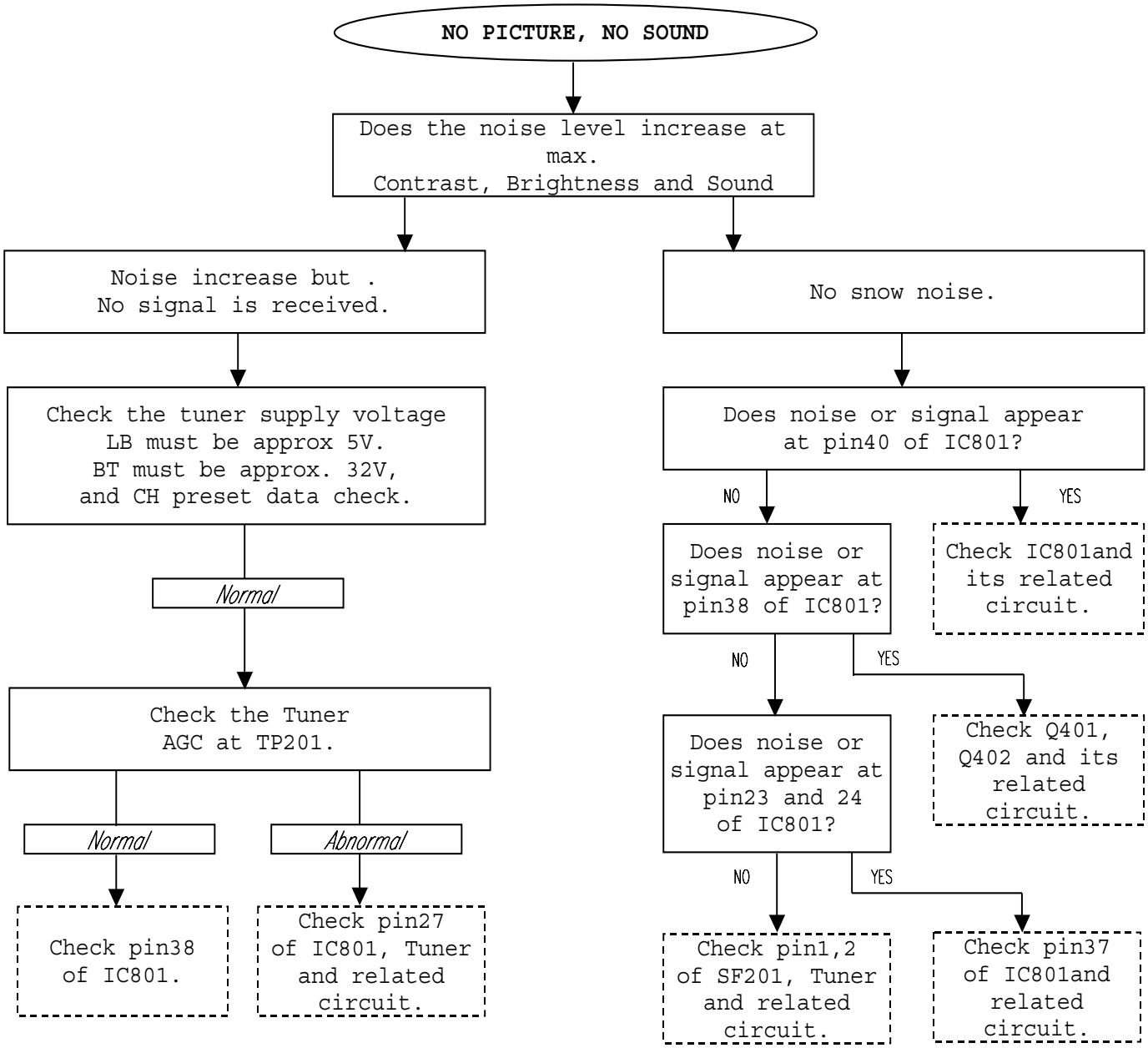
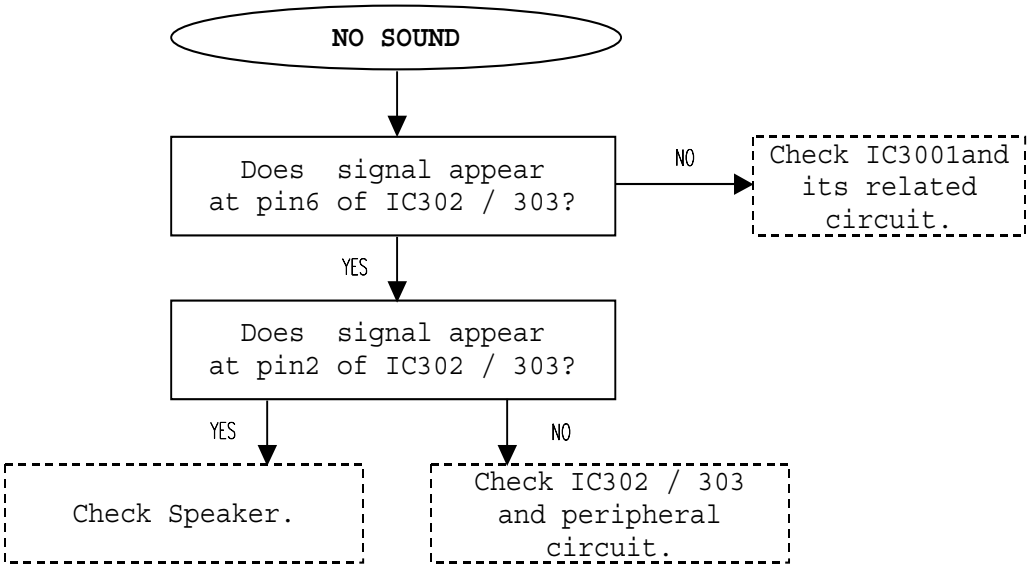
TROUBLESHOOTING TABLES




NO VERTICAL SCAN
Check IC501 bias.
Normal
Abnormal
Check IC501, the connectors F4 and F5, and adjacent
Check D501,D505,C502 and C514


NO SPECIFIC COLOUR
Is some colour produced in B/W broadcast
NO
YES
Check IC801, R801,R802, D804, D805 and D806.
Is the white balance properly adjusted?
YES
NO
Readjusted the white balance.
The picture colour is cyan.
The picture colour is magenta.
The picture colour is yellow.
Check Q870,Q885 and their adjacent circuits.
Check Q871,Q883 and their adjacent circuits.
Check Q872,Q887 and their adjacent circuits.


NO PICTURE, NO SOUND
Does the noise level increase at max. Contrast, Brightness and Sound
Noise increase but . No signal is received.
No snow noise.
Check the tuner supply voltage LB must be approx 5V. BT must be approx. 32V, and CH preset data check.
Does noise or signal appear at pin40 of IC801?
NO
YES
Normal
Does noise or signal appear at pin38 of IC801?
Check IC801and its related circuit.
NO
YES
Check the Tuner AGC at TP201.
Does noise or signal appear at pin23 and 24 of IC801?
Check Q401, Q402 and its related circuit.
Normal
Abnormal
NO
YES
Check pin38 of IC801.
Check pin27 of IC801, Tuner and related circuit.
Check pin1,2 of SF201, Tuner and related circuit.
Check pin37 of IC801and related circuit.


NO SOUND
Does signal appear at pin6 of IC302 / 303?
NO
Check IC3001and its related circuit.
YES
Does signal appear at pin2 of IC302 / 303?
YES
NO
Check Speaker.
Check IC302 / 303 and peripheral circuit.

PARTS LISTING

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual. Electrical components having such features are identified by ⚠ in the Replacement Part List.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted.
Replacement parts not shown in this service manual may create shock fire, or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

MARK*: SPARE PARTS DELIVERY SECTION

	REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
			PICTURE TUBE			
⚠		VB51ERF135X1E	CRT 21" RF 50HZ A51ERF135X60 PHILIPS	S	BP	CF
			MISCELLANEOUS PARTS			
		LHLDW1514BM00	HOLDER UNEX 2233	S	AA	AA
		LHLDWA011WJKA	DEGAUSSING HOLDER 40mm DGCE-4-2-19	S	AA	AA
		QCNW-2621BMZZ	WIRE (4)WAYS	S	AB	AE
		QEARCA018WJZZ	COATING EARTH	S	AB	AE
⚠		RCILGA061WJZZ	DESMAG COIL 21" FLAT	S	AE	AN
			PRINTED WIRING BOARDS (Not replacement item)			
	PWB-A	DUNTK7340CJX2	ADJUST CHASSIS 21KF80C	S	BL	CB
	PWB-B	DUNTK7341BMW6	CRT UNIT INS MANUAL	S	AK	AW
	PWB-C	DUNTKB758BMV0	FRONT JACK INS A 21KF80S	S	AG	AT
	PWB-A		**MOTHER UNIT**			
			TUNER			
	TU 0201	VTUCTF5511+++	TUNER THOMSON	S	AN	AZ
			INTEGRATED CIRCUITS			
	IC 0303	VHIAN7523++-1	IC AN7523 MATSUSHITA	S	AC	AH
	IC 0401	VHITC4066BF1E	IC TC4066BF TOSHIBA	S	AA	AE
	IC 0501	VHIAN5522++-1	IC AN5522 MATSUSHITA	S	AC	AG
	IC 0601	VHIKA7808AP-1	IC KIA7808API KOREA ELECTRONICS	S	AA	AE
	IC 0701	VHITEA1507/-1	IC TEA1507P/N1 PHILIPS	S	AC	AH
⚠	IC 0702	RH-FX0008GEZZ	P/COUPLER RANK-S SHARP	S	AA	AD
	IC 0751	VHITA48M033-1	IC TA48M033F(S) TOSHIBA	S	AB	AF
	IC 0801	RH-IXA097WJN3	IC TDA9351PS/N2/3I0714 PHILIPS	S	AV	BG
	IC 1002	VHIM24C08W6-1	IC M24C08-WMN6T ST MICRO	S	AB	AF
	IC 3001	VHIMSP3415G-1	IC MSP3405G	S	AR	BC
			TRANSISTORS			
	Q 0331	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0351	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0352	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0401	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0402	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0403	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0451	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0501	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0502	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0601	VS2SC2482//-1	TRT 2SC2482 TOSHIBA	S	AA	AC
	Q 0602	VS2SD2586//1E	TRT 2SD2586 TOSHIBA	S	AC	AK
	Q 0603	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0604	VS2SC4793//-1	TRT C4793 TOSHIBA	S	AB	AE
	Q 0605	VS2SA1530ARS1	TRT 2SA1530A-T12-1R MITSUBISHI	S	AA	AA
	Q 0631	VS2SA1530ARS1	TRT 2SA1530A-T12-1R MITSUBISHI	S	AA	AA
	Q 0701	VSSTP4NC80Z1E	MOS FET STP4NC80ZFP TOMEN	S	AC	AH
	Q 0752	VS2SC1815GW-1	TRT NPN 60V 150MA 400MW	S	AA	AA
	Q 0753	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 0754	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 1005	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
	Q 1006	VS2SC3928AR-1	TRT 2SC3928AR-T12-1R MITSUBISHI	S	AA	AA
			DIODES			
	D 0201	RH-EX0676GEZZ	ZENER DIODE MTZJ33CT ROHM	S	AA	AA
	D 0303	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0351	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0361	RH-EX0630GEZZ	ZENER DIODE	S	AA	AA
	D 0451	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0452	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0453	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0454	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0456	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0457	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0481	RH-EX0630GEZZ	ZENER DIODE	S	AA	AA
	D 0501	RH-DX0131CEZZ	DIODE EU-1 SANKEN	S	AA	AB
	D 0502	RH-DX0441CEZZ	DIODE IN4002G23 GENERAL INSTRUMENT	S	AA	AB
	D 0503	RH-EX0684GEZZ	ZENER DIODE MTZJ39BT ROHM	S	AA	AA
	D 0504	RH-EX0684GEZZ	ZENER DIODE MTZJ39BT ROHM	S	AA	AA
	D 0505	RH-DX0131CEZZ	DIODE EU-1 SANKEN	S	AA	AB
	D 0507	RH-EX0603GEZZ	Z.DIODE MTZJ 3.9A	S	AA	AA
	D 0508	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0509	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0510	RH-EX0627GEZZ	ZENER DIODE MTZJ8.2BT ROHM	S	AA	AA
	D 0601	RH-DX0302CEZZ	DIODE UZA	S	AA	AB
	D 0602	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0603	RH-DX0131CEZZ	DIODE EU-1 SANKEN	S	AA	AB
	D 0604	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0605	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0606	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0607	RH-EX0653GEZZ	DIODE ZENER MTZJ18C ROHM	S	AA	AA
	D 0608	RH-DX0577BMZZ	DIODE 1N4935 ACPA	S	AB	AE
	D 0609	VHD1SS244//-1	SW DIODE 1SS244T-72	S	AA	AA
	D 0610	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0611	RH-EX0615GEZZ	ZENER DIODE 5.6V	S	AA	AA
	D 0612	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0614	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0615	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0631	RH-EX0627GEZZ	ZENER DIODE MTZJ8.2BT ROHM	S	AA	AA
	D 0632	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0701	RH-DX0571BMZZ	DIODE 1N4005 ACPA	S	AA	AA
	D 0702	RH-DX0571BMZZ	DIODE 1N4005 ACPA	S	AA	AA
	D 0703	RH-DX0571BMZZ	DIODE 1N4005 ACPA	S	AA	AA
	D 0704	RH-DX0571BMZZ	DIODE 1N4005 ACPA	S	AA	AA
	D 0705	VHD1SS244//-1	SW DIODE 1SS244T-72	S	AA	AA
	D 0708	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0709	RH-EX0656GEZZ	ZENER DIODE MTZJ20C ROHM	S	AA	AA
	D 0751	RH-DX0302CEZZ	DIODE UZA	S	AA	AB
	D 0752	RH-DX0064GEZZ	DIODE AK04V1 SANKEN	S	AA	AC
	D 0753	RH-EX0612GEZZ	ZENER DIODE MTZJ5.1BT ROHM	S	AA	AA
	D 0756	RH-EX0615GEZZ	ZENER DIODE 5.6V	S	AA	AA
	D 0758	RH-DX0468CEZZ	DIODE S3L20U SHINDENGEN	S	AA	AD
	D 0804	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0805	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0806	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 0807	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
	D 1001	RH-PX0013PEZZ	LED L-53ID-13.95L/F	S	AA	AB
	D 1013	RH-EX1399CEZZ	ZENER DIODE UDZSTE-179.1B WAKO ELECTRIC	S	AA	AB
			PACKAGED CIRCUITS			
	PR 0701	RMPTP0001BMZZ	PTC B59250-C1080-B70	S	AA	AD
	X 1001	RCRSB0300CEZZ	CRYSTAL HC-49/U-S 12000KHz-A1	S	AB	AF
	X 3001	RCRSB0249GEZZ	X'TAL 18.432MHZ	S	AA	AE
			COILS			
	L 0201	VP-DF270K0000	PEAK COIL 27UH 10%	S	AA	AB
	L 0204	VP-DF270K0000	PEAK COIL 27UH 10%	S	AA	AB
	L 0308	VP-CF3R3K0000	PEAK COIL 3.3UH 10%	S	AB	AB
	L 0351	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
	L 0352	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
	L 0353	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
	L 0354	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
	L 0361	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
	L 0401	VP-DF1R0M0000	PEAK COIL 1UH 20%	S	AA	AA
	L 0403	VP-XF120K0000	PEAK COIL 12UH 10%	S	AA	AA
	L 0451	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
	L 0602	RCILP0225CEZZ	COIL SL_A TOKYO	S	AA	AD
	L 0603	RCILZ0717BMZZ	LINE COIL LH13JL53SH	S	AE	AH
	L 0701	RCILF0111BMZZ	COIL HR-19043	S	AE	AL
	L 0801	VP-XF100K0000	PEAK COIL 10UH 10%	S	AA	AA
	L 0802	VP-XF100K0000	PEAK COIL 10UH 10%	S	AA	AA
	L 1002	VP-XF100K0000	PEAK COIL 10UH 10%	S	AA	AA
	L 3001	VP-DF100K0000	PEAK COIL 10UH 10%	S	AA	AA
	L 3002	VP-DF100K0000	PEAK COIL 10UH 10%	S	AA	AA
	L 3003	VP-DF100K0000	PEAK COIL 10UH 10%	S	AA	AA
	L 3030	VP-CF3R3K0000	PEAK COIL 3.3UH 10%	S	AB	AB
	L 3050	VP-CF3R3K0000	PEAK COIL 3.3UH 10%	S	AB	AB
	L 3060	VP-CF3R3K0000	PEAK COIL 3.3UH 10%	S	AB	AB
			CERAMIC FILTERS			
	CF 0401	RFILC0168GEZZ	SIF TRAP 5.5/6.5MHZ (MRT)	S	AA	AE
	SF 0201	RFILC0291BMZZ	SAW FILTER K2955M SIEMENS	S	AH	AP
			TRANSFORMERS			
	T 0601	RTRNZ0026PEZZ	DRIVER TRANSFORMER	S	AB	AE
⚠	T 0602	RTRNFA056WJZZ	FBT 21" FLAT	S	AL	AX
⚠	T 0701	RTRNWA091WJZZ	TRANSFORMER	S	AD	AM
			CAPACITORS			
	C 0201	VCEA0A1CW476M	ELEC C 47UF 20% 16V	S	AA	AA
	C 0202	VCEA0A1AW107M	ELEC C 100UF 20% 10V	S	AA	AA
	C 0204	VCEA0A1HW106M	ELEC C 10UF 20% 50V	S	AA	AA
	C 0206	VCKYCY1HF223Z	SC CAPACITOR 0.022UF 50V TAPED	S	AA	AA
	C 0207	VCKYCY1HB472K	S.CHIP CAP 4700PF/50V T	S	AA	AA
	C 0208	VCKYCY1HB821K	GRM39B 821K 50 (1608)SMD CAPACITOR	S	AA	AA
	C 0209	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
	C 0210	VCCCCY1HH220J	S. CHIP CAP 22PF/50V TAPED	S	AA	AA
	C 0211	VCKYPA1HF103Z	C.CAPACITOR 0.01U-F 50V	S	AA	AA
	C 0212	VCKYPA1HF103Z	C.CAPACITOR 0.01U-F 50V	S	AA	AA
	C 0215	VCCCCY1HH220J	S. CHIP CAP 22PF/50V TAPED	S	AA	AA
	C 0302	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
	C 0305	VCEA0A1EW337M	ELEC C 330UF 20% 25V	S	AA	AB
	C 0307	VCEA0A1CW226M	ELEC C 22UF 20% 16V	S	AA	AA
	C 0308	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
	C 0309	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA

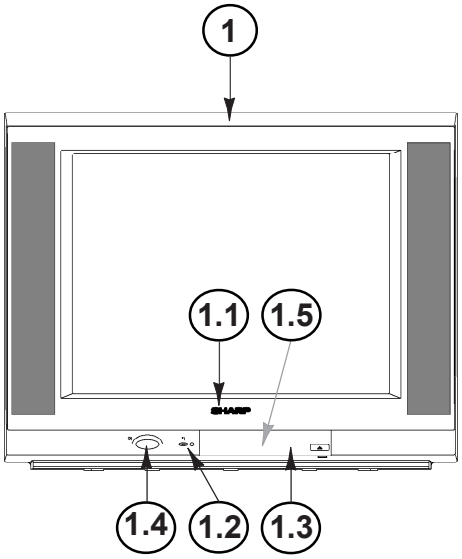
REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
C 0314	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0317	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 0318	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0320	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0322	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0323	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0324	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0327	VCCCCY1HH221J	S. CHIP CAP 220PF/50V TAPED	S	AA	AA
C 0328	VCCCCY1HH221J	S. CHIP CAP 220PF/50V TAPED	S	AA	AA
C 0331	VCEA0A1HW225M	ELEC C 2,2UF 20% 50V	S	AA	AA
C 0341	VCKYCY1HB332K	S.CHIP CAP 3300PF/50V	S	AA	AA
C 0342	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0344	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0349	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0351	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0352	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 0354	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 0356	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0357	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 0358	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 0359	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0360	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0361	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0362	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0363	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0370	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0381	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0382	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0401	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0402	VCCCCY1HH220J	S. CHIP CAP 22PF/50V TAPED	S	AA	AA
C 0403	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0404	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0431	VCKYCY1HF223Z	SC CAPACITOR 0.022UF 50V TAPED	S	AA	AA
C 0432	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0433	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 0451	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0453	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0481	VCEA0A1AW107M	ELEC C 100UF 20% 10V	S	AA	AA
C 0502	VCEA0A1EW477M	ELEC C 470UF 20% 25V	S	AA	AB
C 0504	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
C 0505	VCEA0A1HW107M	ELEC C 100UF 20% 50V	S	AA	AA
C 0506	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
C 0507	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0508	RC-FZ0272CEZZ	C POL P 0,39UF 100V	S	AA	AC
C 0509	VCQYTA2AA563J	POL FILM C 56NF 5% 100V	S	AA	AA
C 0511	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
C 0512	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0513	VCKYPA2HB102K	CERAM C 1NF 10% 500V	S	AA	AA
C 0514	VCEA0A1EW477M	ELEC C 470UF 20% 25V	S	AA	AB
C 0515	VCQYTA1HM103J	F. CAPACITOR 0.01UF/50V	S	AA	AA
C 0521	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0522	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
C 0531	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0532	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0533	VCQYTA1HM104J	F. CAPACITOR 0.1 UF 50 V	S	AA	AA
C 0599	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0602	VCEA0A1CW477M	ELEC C 470UF 20% 16V	S	AA	AA
C 0603	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 0604	VCKYPA1HF103Z	C.CAPACITOR 0.01U-F 50V	S	AA	AA
C 0605	VCEA0A1AW227M	ELEC C 220UF 20% 10V	S	AA	AA
C 0606	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 0607	VCKYPA1HF103Z	C.CAPACITOR 0.01U-F 50V	S	AA	AA
C 0608	VCKYCY1CF224Z	S.C.CAP 0.22UF 16V TAPED	S	AA	AA
C 0609	VCKYPA2HB102K	CERAM C 1NF 10% 500V	S	AA	AA
C 0610	VCFYSB2EB823J	POL FILM C 82NF 5% 250V	S	AA	AB
C 0611	VCFPVC3ZA103H	PP FILM C 10NF 3% 1,8KV	S	AA	AC
C 0614	VCFPVC2DB274J	PP FILM C 270NF 5% 200V	S	AA	AB
C 0615	RC-EZ0724CEZZ	ELEC C 100UF 160V KMF160VB-100MMC NICHIC	S	AB	AE
C 0616	VCQYTA1HM104J	F. CAPACITOR 0.1 UF 50 V	S	AA	AA
C 0617	VCEA0A1HW105M	ELEC C 1UF 20% 50V	S	AA	AA
C 0619	VCEA0A1HW106M	ELEC C 10UF 20% 50V	S	AA	AA
C 0620	VCKYPA2HB221K	CERAM C 220PF 10% 500V	S	AA	AA
C 0621	VCEA0A2CW105M	ELEC C 1UF 20% 160V	S	AA	AA
C 0622	VCEA0A1CW227M	E CAPACITOR 220UF 16V 6.3x11	S	AA	AB
C 0623	VCEA0A1CW337M	ELEC C 330UF 20% 16V	S	AA	AA
C 0631	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 0632	VCKYCY1HB222K	S CHIP CAPACITOR 0.0022UF/50V TAPED	S	AA	AA
C 0633	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
⚠ C 0701	RC-FZ0176BMZZ	POL C B81130 100NF 275V X2	S	AA	AB
C 0702	RC-KZ0029CEZZ	CERAM C 10NF 80,20% 250V	S	AC	AC
C 0703	RC-KZ0029CEZZ	CERAM C 10NF 80,20% 250V	S	AC	AC
C 0704	RC-KZ0029CEZZ	CERAM C 10NF 80,20% 250V	S	AC	AC
C 0705	RC-EZ1044CEZZ	ELEC C 150UF 400V SMH400VNSN150M22	S	AD	AK
C 0707	VCEA0A1EW107M	E. CAPACITOR 100UF 25V 6.3x11	S	AA	AA
C 0708	VCQYTA1HM104J	F. CAPACITOR 0.1 UF 50 V	S	AA	AA
C 0709	VCFYFA1HA474J	FILM CAPACITOR 474 MAT	S	AA	AB
C 0710	RC-KZ0040CEZZ	CERAM C 820PF 2KV	S	AD	AD
⚠ C 0712	RC-KZ0105GEZZ	C CERAM 2,2NF 4KV X1Y1 DE1E3KX222MJ5BA01	S	AA	AB
C 0713	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
C 0716	VCKYPA2HB102K	CERAM C 1NF 10% 500V	S	AA	AA
C 0751	RC-KZ0299CEZZ	CERAM C DE1105-979BN821K2K-A3 MURATA	S	AA	AB
C 0752	RC-EZ0006PEZZ	ELEC C 220UF 160V UJA2C221MHHBTYAA-A	S	AB	AF
C 0753	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
C 0754	VCEA0A1CW108M	ELEC C 1000MF 16V 10X16MM	S	AA	AB
C 0755	VCEA0A1CW227M	E CAPACITOR 220UF 16V 6.3x11	S	AA	AB
C 0756	VCEA0A0JW227M	E CAPACITOR 220UF/6.3V-5X11	S	AA	AA
C 0757	VCKYPA2HB102K	CERAM C 1NF 10% 500V	S	AA	AA
C 0758	VCEA0A1EW108M	ELEC C 1000UF 20% 25V	S	AA	AC
C 0759	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
C 0761	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 0762	VCCCPA1HH680J	CERAM C 68PF 5% 50V	S	AA	AA
C 0764	VCEA0A1EW107M	E. CAPACITOR 100UF 25V 6.3x11	S	AA	AA
C 0765	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 0767	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0801	VCEA0A1CW227M	E CAPACITOR 220UF 16V 6.3x11	S	AA	AB
C 0803	VCFYFA1HA224J	PP FILM C 220NF 5% 50V	S	AA	AA
C 0804	VCFYFA1HA224J	PP FILM C 220NF 5% 50V	S	AA	AA
C 0805	VCKYCY1HB222K	S CHIP CAPACITOR 0.0022UF/50V TAPED	S	AA	AA
C 0806	VCEA0A1HW105M	ELEC C 1UF 20% 50V	S	AA	AA
C 0807	VCKYCY1HB472K	S.CHIP CAP 4700PF/50V T	S	AA	AA
C 0808	VCKYCY1HF223Z	SC CAPACITOR 0.022UF 50V TAPED	S	AA	AA
C 0809	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 0810	VCEA0A1HW474M	ELEC C 0,47UF 20% 50V	S	AA	AA
C 0811	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0812	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0813	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 0814	VCKYCY1HB561K	S. CAPACITOR 560PF/50V	S	AA	AA
C 0815	VCEA0A1CW227M	E CAPACITOR 220UF 16V 6.3x11	S	AA	AB
C 0817	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0818	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0819	VCEA0A1CW227M	E CAPACITOR 220UF 16V 6.3x11	S	AA	AB
C 0822	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 0823	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 1001	VCCCCY1HH330J	S. CHIP CAP 33PF/50V	S	AA	AA
C 1002	VCCCCY1HH330J	S. CHIP CAP 33PF/50V	S	AA	AA
C 1004	VCKYCY1CF224Z	S.C.CAP 0.22UF 16V TAPED	S	AA	AA
C 1006	VCKYCY1HF223Z	SC CAPACITOR 0.022UF 50V TAPED	S	AA	AA
C 1009	VCEA0A0JW107M	ELEC C 100UF 20% 6,3V	S	AA	AA
C 1010	VCKYCY1CF224Z	S.C.CAP 0.22UF 16V TAPED	S	AA	AA
C 1011	VCEA0A0JW107M	ELEC C 100UF 20% 6,3V	S	AA	AA
C 1012	VCKYCY1CF224Z	S.C.CAP 0.22UF 16V TAPED	S	AA	AA
C 1013	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 1014	VCEA0A0JW107M	ELEC C 100UF 20% 6,3V	S	AA	AA
C 1015	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 1016	VCEA0A1CW476M	ELEC C 47UF 20% 16V	S	AA	AA
C 1017	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 1018	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 1021	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 3001	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 3003	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 3004	VCCCCY1HH471J	GRM39CK 471J 50 (1608)SMD CAPACITOR	S	AA	AA
C 3005	VCEA0A1CW107M	ELEC C 100UF 20% 16V	S	AA	AA
C 3006	VCEA0A1HW335M	ELEC C 3,3UF 20% 50V	S	AA	AA
C 3007	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 3008	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 3009	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 3010	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 3011	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 3012	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 3014	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 3015	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 3016	VCCCCY1HH220J	S. CHIP CAP 22PF/50V TAPED	S	AA	AA
C 3017	VCCCCY1HH560J	S. CHIP CAP 56PF/50V TAPE	S	AA	AA
C 3018	VCCCCY1HH560J	S. CHIP CAP 56PF/50V TAPE	S	AA	AA
C 3019	VCCCCY1HH1R5C	GRM39CK 1R5C 50 (1608)SMD CAPACITOR	S	AA	AA
C 3020	VCCCCY1HH1R5C	GRM39CK 1R5C 50 (1608)SMD CAPACITOR	S	AA	AA
C 3021	VCKYCY1EF104Z	S CHIP TAPE CAP 0.1UF/25V	S	AA	AA
C 3022	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 3023	VCCCCY1HH471J	GRM39CK 471J 50 (1608)SMD CAPACITOR	S	AA	AA
C 3024	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 3025	VCKYCY1HB102K	S. CHIP CAP 0.001UF/50V	S	AA	AA
C 3026	VCEA0A1HW105M	ELEC C 1UF 20% 50V	S	AA	AA
C 3027	VCEA0A1HW105M	ELEC C 1UF 20% 50V	S	AA	AA
C 3028	VCKYCY1HF103Z	CHIP CAP 0.01UF/50V	S	AA	AA
C 3029	VCEA0A1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
C 3030	VCCCCY1HH151J	GRM39CK 151J 50 (1608)SMD CAPACITOR	S	AA	AA
C 3031	VCCCCY1HH470J	S. CHIP CAP 47PF/50V (TAPED)	S	AA	AA
		RESISTORS			
R 0201	VRD-RA2BE332J	RES 3,3KOHM 5% 1/8W	S	AA	AA
R 0202	VRS-CY1JF681J	S. CHIP RES. 680-OHM TAPED	S	AA	AA
R 0208	VRS-CY1JF102J	S.CHIP RES TAPE 1K OHM	S	AA	AA
R 0209	VRS-CY1JF391J	SURFACE MOUNT CHIP RESISTOR 390 OHM	S	AA	AA
R 0302	VRS-CY1JF472J	S. RES. 4.7K OHM TAPED	S	AA	AA
R 0303	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA
R 0304	VRD-RA2HD680J	RES 68 OHM 5% 1/2W	S	AA	AA
R 0305	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA
R 0306	VRS-CY1JF392J	S. CHIP RES. 3.9K-OHM TAPED	S	AA	AA
R 0311	VRD-RA2HD680J	RES 68 OHM 5% 1/2W	S	AA	AA
R 0331	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 0332	VRS-CY1JF473J	S. CHIP RES 47K-OHM TAPED	S	AA	AA
R 0333	VRD-RA2BE103J	RES 10KOHM 5% 1/8W	S	AA	AA
R 0341	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0351	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 0352	VRS-CY1JF104J	S. CHIP RES. 100K-OHM TAPED	S	AA	AA
R 0354	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 0355	VRS-CY1JF104J	S. CHIP RES. 100K-OHM TAPED	S	AA	AA
R 0356	VRS-CY1JF102J	S.CHIP RES TAPE 1K OHM	S	AA	AA

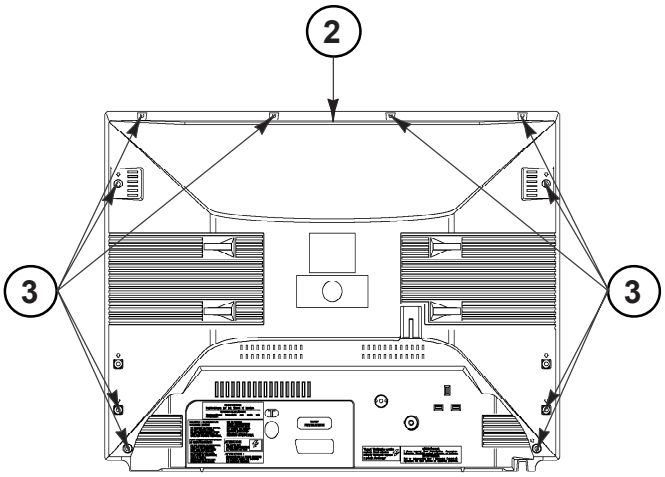
REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
R 0357	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 0359	VRS-CY1JF102J	S.CHIP RES TAPE 1K OHM	S	AA	AA
R 0360	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 0362	VRS-CY1JF472J	S. RES. 4.7K OHM TAPED	S	AA	AA
R 0363	VRS-CY1JF104J	S. CHIP RES. 100K-OHM TAPED	S	AA	AA
R 0364	VRS-CY1JF472J	S. RES. 4.7K OHM TAPED	S	AA	AA
R 0365	VRS-CY1JF104J	S. CHIP RES. 100K-OHM TAPED	S	AA	AA
R 0366	VRS-CY1JF561J	S. CHIP RES 560-OHM TAPED	S	AA	AA
R 0367	VRS-CY1JF561J	S. CHIP RES 560-OHM TAPED	S	AA	AA
R 0381	VRS-CY1JF104J	S. CHIP RES. 100K-OHM TAPED	S	AA	AA
R 0401	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0403	VRS-CY1JF102J	S.CHIP RES TAPE 1K OHM	S	AA	AA
R 0404	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 0405	VRS-CY1JF181J	S CHIP RES. 180-OHM TAPED	S	AA	AA
R 0406	VRS-CY1JF102J	S.CHIP RES TAPE 1K OHM	S	AA	AA
R 0407	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 0408	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 0409	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA
R 0410	VRS-CY1JF473J	S. CHIP RES 47K-OHM TAPED	S	AA	AA
R 0411	VRS-CY1JF473J	S. CHIP RES 47K-OHM TAPED	S	AA	AA
R 0413	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 0451	VRD-RA2EE750J	RES 75 OHM 5% 1/4W	S	AA	AA
R 0452	VRS-CY1JF104J	S. CHIP RES. 100K-OHM TAPED	S	AA	AA
R 0453	VRS-CY1JF223J	S.CHOP REG 22K-OHM T	S	AA	AA
R 0454	VRS-CY1JF562J	S. CHIP RES. 5.6K-OHM TAPED	S	AA	AA
R 0455	VRD-RA2EE750J	RES 75 OHM 5% 1/4W	S	AA	AA
R 0456	VRD-RA2EE750J	RES 75 OHM 5% 1/4W	S	AA	AA
R 0457	VRD-RA2EE750J	RES 75 OHM 5% 1/4W	S	AA	AA
R 0458	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 0459	VRD-RA2EE750J	RES 75 OHM 5% 1/4W	S	AA	AA
R 0460	VRD-RA2EE750J	RES 75 OHM 5% 1/4W	S	AA	AA
R 0461	VRD-RA2BE224J	RES 220KOHM 5% 1/8W	S	AA	AA
R 0482	VRD-RA2EE750J	RES 75 OHM 5% 1/4W	S	AA	AA
R 0490	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 0493	VRS-CY1JF563J	S. CHIP RES 560 OHM TAPED	S	AA	AA
R 0494	VRS-CY1JF563J	S. CHIP RES 560 OHM TAPED	S	AA	AA
R 0501	VRD-RA2BE392J	RES 3,9KOHM 5% 1/8W	S	AA	AA
R 0502	VRN-VV3DB2R7J	MET FILM R 2,7 OHM 5% 2W	S	AA	AB
R 0503	VRD-RA2HD331J	RES 330 OHM 5% 1/2W	S	AA	AA
R 0504	VRS-CY1JF181J	S CHIP RES. 180-OHM TAPED	S	AA	AA
R 0505	VRD-RA2BE1R0J	RES 1 OHM 5% 1/8W	S	AA	AA
R 0507	VRS-CY1JF181J	S CHIP RES. 180-OHM TAPED	S	AA	AA
R 0509	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA
R 0511	VRD-RA2HD102J	RES 1KOHM 5% 1/2W	S	AA	AA
R 0512	VRD-RA2BE100J	RES 10 OHM 5% 1/8W	S	AA	AA
R 0513	VRD-RA2BE103J	RES 10KOHM 5% 1/8W	S	AA	AA
R 0514	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 0515	VRS-CY1JF153J	S CHIP RES. 15K-OHM TAPED	S	AA	AA
R 0516	VRS-CY1JF153J	S CHIP RES. 15K-OHM TAPED	S	AA	AA
R 0517	VRS-CY1JF223J	S.CHOP REG 22K-OHM T	S	AA	AA
R 0518	VRS-CY1JF334J	S. CHIP RES. 330K-OHM TAPED	S	AA	AA
R 0531	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 0532	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 0533	VRD-RA2BE393J	RES 39KOHM 5% 1/8W	S	AA	AA
R 0603	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA
R 0604	VRD-RA2HD472J	RES 4.7KOHM 5% 1/2W	S	AA	AA
R 0605	VRS-KT3LB392J	MET OX RES 3,9KOHM 5% 3W	S	AA	AD
R 0606	VRD-RA2HD102J	RES 1KOHM 5% 1/2W	S	AA	AA
R 0607	VRD-RA2BE104J	RES 100KOHM 5% 1/8W	S	AA	AA
R 0608	VRN-VV3DB1R2J	MET FILM R 1,2 OHM 5% 2W	S	AA	AB
R 0609	VRD-RA2HD101J	RES 100 OHM 5% 1/2W	S	AA	AA
R 0610	VRS-CY1JF102J	S.CHIP RES TAPE 1K OHM	S	AA	AA
R 0611	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 0612	VRD-RA2BE331J	RES 330 OHM 5% 1/8W	S	AA	AA
R 0613	VRD-RA2HD184J	RES 180KOHM 5% 1/2W	S	AA	AA
R 0614	VRD-RA2HD472J	RES 4.7KOHM 5% 1/2W	S	AA	AA
R 0615	VRD-RA2HD472J	RES 4.7KOHM 5% 1/2W	S	AA	AA
R 0616	VRD-RA2HD182J	RES 1,8KOHM 5% 1/2W	S	AA	AA
R 0618	VRD-RA2BE123J	RES 12KOHM 5% 1/8W	S	AA	AA
R 0619	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 0620	VRD-RA2HD120J	RES 12 OHM 5% 1/2W	S	AA	AA
R 0621	VRD-RA2HD820J	RES 82 OHM 5% 1/2W	S	AA	AA
R 0622	VRD-RA2HD222J	RES 2,2KOHM 5% 1/2W	S	AA	AA
R 0623	VRS-VV3DB562J	MET OX RES 5,6KOHM 5% 2W	S	AA	AA
R 0624	VRD-RA2BE123J	RES 12KOHM 5% 1/8W	S	AA	AA
R 0625	VRD-RA2BE103J	RES 10KOHM 5% 1/8W	S	AA	AA
R 0626	VRS-CY1JF562J	S. CHIP RES. 5.6K-OHM TAPED	S	AA	AA
R 0627	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 0629	VRD-RA2EE151J	RES 150 OHM 5% 1/4W	S	AA	AA
R 0630	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 0631	VRD-RA2BE391J	RES 390 OHM 5% 1/8W	S	AA	AA
R 0632	VRD-RA2BE273J	RES 27KOHM 5% 1/8W	S	AA	AA
R 0633	VRS-CY1JF822J	S. CHIP RES. 8.2K-OHM TAPED	S	AA	AA
R 0634	VRS-CY1JF102J	S.CHIP RES TAPE 1K OHM	S	AA	AA
R 0636	VRS-CY1JF154J	S CHIP RES. 150K-OHM TAPED	S	AA	AA
R 0637	VRS-CY1JF273J	S. CHIP RES. 27-OHM TAPED	S	AA	AA
R 0638	VRS-CY1JF221J	S. CHIP RES. 220-OHM TAPED	S	AA	AA
R 0639	VRD-RA2BE333J	RES 33KOHM 5% 1/8W	S	AA	AA
R 0640	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 0701	VRW-KP3HC5R6K	WOUND RES 5,6 OHM 10% 5W	S	AB	AC
R 0705	VRD-RA2HD180J	RES 18 OHM 5% 1/2W	S	AA	AA
R 0706	VRD-RA2BE122J	RES 1,2KOHM 5% 1/8W	S	AA	AA
R 0707	VRD-RA2BE393J	RES 39KOHM 5% 1/8W	S	AA	AA
R 0708	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA

REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
R 0710	VRN-VV3ABR22J	MET FILM R .22 OHM 5% 1W	S	AB	AA
R 0711	VRD-RA2BE270J	RES 27 OHM 5% 1/8W	S	AA	AA
R 0712	VRD-RA2HD100J	RES 10 OHM 5% 1/2W	S	AA	AA
R 0713	VRD-RA2BE474J	RES 470KOHM 5% 1/8W	S	AA	AA
⚠ R 0716	RR-HZ0014GEZZ	RES ALTO VOLT. 12MOHM 5% 1W RCR60 KOA	S	AA	AC
R 0718	VRD-RA2BE824J	RES 820KOHM 5% 1/8W	S	AA	AA
R 0752	VRD-RA2HD102J	RES 1KOHM 5% 1/2W	S	AA	AA
R 0761	VRD-RA2BE821J	RES 820 OHM 5% 1/8W	S	AA	AA
R 0762	VRD-RA2HD184J	RES 180KOHM 5% 1/2W	S	AA	AA
R 0763	VRD-RA2BE822J	RES 8,2KOHM 5% 1/8W	S	AA	AA
R 0766	VRD-RA2EE273J	RES 27K OHM 5% 1/4W	S	AA	AA
R 0768	VRD-RA2HD124J	RES 120KOHM 5% 1/2W	S	AA	AA
R 0770	VRD-RA2HD181J	RES 180 OHM 5% 1/2W	S	AA	AA
R 0771	VRD-RA2HD181J	RES 180 OHM 5% 1/2W	S	AA	AA
R 0772	VRS-CY1JF333J	S. CHIP RES. 33K-OHM TAPED	S	AA	AA
R 0773	VRS-CY1JF153J	S CHIP RES. 15K-OHM TAPED	S	AA	AA
R 0774	VRS-CY1JF332J	S. CHIP RES. 3.3K-OHM TAPED	S	AA	AA
R 0801	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0802	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0803	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0804	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0805	VRS-CY1JF223J	S.CHOP REG 22K-OHM T	S	AA	AA
R 0806	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0807	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0808	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 0809	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1001	VRS-CY1JF181J	S CHIP RES. 180-OHM TAPED	S	AA	AA
R 1002	VRS-CY1JF221J	S. CHIP RES. 220-OHM TAPED	S	AA	AA
R 1003	VRS-CY1JF331J	S CHIP RES TAPE 330 OHM	S	AA	AA
R 1004	VRS-CY1JF681J	S. CHIP RES. 680-OHM TAPED	S	AA	AA
R 1005	VRS-CY1JF472J	S. RES. 4.7K OHM TAPED	S	AA	AA
R 1006	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1008	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 1009	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 1014	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 1015	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 1016	VRD-RA2BE332J	RES 3,3KOHM 5% 1/8W	S	AA	AA
R 1017	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 1018	VRD-RA2BE332J	RES 3,3KOHM 5% 1/8W	S	AA	AA
R 1019	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1020	VRS-CY1JF153J	S CHIP RES. 15K-OHM TAPED	S	AA	AA
R 1022	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1023	VRD-RA2BE153J	RES 15KOHM 5% 1/8W	S	AA	AA
R 1024	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1025	VRS-CY1JF122J	S. RESISTOR 1.2K OHM	S	AA	AA
R 1026	VRS-CY1JF224J	S. CHIP RES. 220K-OHM TAPED	S	AA	AA
R 1027	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1028	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 1029	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1033	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1034	VRD-RA2BE332J	RES 3,3KOHM 5% 1/8W	S	AA	AA
R 1035	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1036	VRD-RA2BE332J	RES 3,3KOHM 5% 1/8W	S	AA	AA
R 1037	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 1038	VRS-CY1JF223J	S.CHOP REG 22K-OHM T	S	AA	AA
R 1040	VRS-CY1JF152J	S. CHIP RES. 1.5K-OHM	S	AA	AA
R 1041	VRS-CY1JF152J	S. CHIP RES. 1.5K-OHM	S	AA	AA
R 1042	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 1043	VRS-CY1JF562J	S. CHIP RES. 5.6K-OHM TAPED	S	AA	AA
R 1044	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 1047	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 1048	VRS-CY1JF391J	SURFACE MOUNT CHIP RESISTOR 390 OHM	S	AA	AA
R 1052	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 1053	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
R 1054	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 1056	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 1057	VRS-CY1JF472J	S. RES. 4.7K OHM TAPED	S	AA	AA
R 1058	VRS-CY1JF101J	S. CHIP RES. 100-OHM TAPED	S	AA	AA
R 3001	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 3002	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 3003	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 3004	VRD-RA2BE101J	RES 100 OHM 5% 1/8W	S	AA	AA
R 3008	VRS-CY1JF103J	S.C. RESISTOR 10K OHM	S	AA	AA
R 3009	VRS-CY1JF333J	S. CHIP RES. 33K-OHM TAPED	S	AA	AA
R 3010	VRS-CY1JF562J	S. CHIP RES. 5.6K-OHM TAPED	S	AA	AA
R 3011	VRS-CY1JF333J	S. CHIP RES. 33K-OHM TAPED	S	AA	AA
R 3012	VRS-CY1JF562J	S. CHIP RES. 5.6K-OHM TAPED	S	AA	AA
		MISCELLANEOUS PARTS			
⚠ F 0701	QFS-C3229CEZZ	FUSE S506-3.15A-A1 TOKYO COMPONENTS	S	AA	AC
⚠ F 0751	QFS-J2521CEZZ	FUSE 2,5A 125V LITTELFUSE (KURODA9	S	AC	AD
FB 0301	RBLN-0037CEZZ	BALUN FBA04HA90088-00 T/Y	S	AB	AB
FB 0451	RBLN-0037CEZZ	BALUN FBA04HA90088-00 T/Y	S	AB	AB
FB 0452	RBLN-0037CEZZ	BALUN FBA04HA90088-00 T/Y	S	AB	AB
FB 0601	RBLN-0037CEZZ	BALUN FBA04HA90088-00 T/Y	S	AB	AB
FB 0701	RBLN-0037CEZZ	BALUN FBA04HA90088-00 T/Y	S	AB	AB
FH 0701	QFSHD1001BMZZ	FUSE HOLD.EYF52BC=PANASON	S	AA	AA
FH 0702	QFSHD1002BMZZ	FUSE HOLD.EYF52BC=PANASON	S	AA	AA
J 0351	QJAKFA011WJZZ	JACK	S	AA	AC
P 0302	QPLGN0441CEZZ	PLUG 4PIN	S	AA	AA
P 0601	QPLGN0441CEZZ	PLUG 4PIN	S	AA	AA
P 0602	QPLGN0560CEZZ	CONNECTOR 5 PIN TV-50P-05-V2 A TAIKO	S	AA	AB
P 0701	QPLGN0360CEZZ	CONNECTOR 3 PIN TV-50P-03-V2 A TAIKO	S	AA	AA
P 0702	QPLGN0260CEZZ	CONNECTOR 2 PIN TV-50P-02-V2 A TAIKO	S	AA	AA

	REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
	P 0801	QPLGN0541CEZZ	PLUG	S	AA	AA
	P 1001	QPLGN0641CEZZ	CONNECTOR B6B-EH-A JST	S	AA	AA
	P 3001	QPLGN0741CEZZ	PLUG	S	AA	AA
	P 3002	QPLGN0341CEZZ	PLUG	S	AA	AA
	RJ 0001	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0002	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0004	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0008	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0009	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0010	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0013	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0019	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0020	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0024	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0025	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0026	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0027	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0029	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0031	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0032	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0033	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0035	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0036	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0044	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0046	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0047	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0048	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0057	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0058	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0059	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0061	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0062	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0064	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0065	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0067	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0068	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0070	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0072	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0075	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0077	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0078	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0080	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0081	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0082	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0084	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RJ 0085	VRS-CY1JF000J	S. CHIP RES. 0-OHM TAPED	S	AA	AA
	RMC1001	RRMCU0235CEZZ	R/M RECEIVER TSOP1838UH1-A VISHAY	S	AB	AG
⚠	S 0701	QSW-P0591CEZZ	SWITCH SDDFC3-A ALPS	S	AD	AL
	S 1001	QSW-K0003AJZZ	SWITCH	S	AA	AA
	S 1002	QSW-K0003AJZZ	SWITCH	S	AA	AA
	S 1003	QSW-K0003AJZZ	SWITCH	S	AA	AA
	S 1004	QSW-K0003AJZZ	SWITCH	S	AA	AA
	S 1005	QSW-K0003AJZZ	SWITCH	S	AA	AA
	SC 0451	QSOCZ2107BMZZ	SOCKET	S	AF	AE
	VA 0701	RH-VX0047CEZZ	VARISTOR SIOV-S14K420M4 MATSUSHITA	S	AA	AC
		LHLDP1066PE00	LED HOLDER	S	AA	AB
		QCNW-B150WJZZ	SHIELD WIRE	S	AB	AE
		QCNW-B162WJZZ	SHIELD CASE (J2)	S	AB	AE
	PWB-B		**CRT UNIT**			
			TRANSISTORS			
	Q 0870	VSBF422////-1	TRT BF422 PHILIPS	S	AA	AA
	Q 0871	VSBF422////-1	TRT BF422 PHILIPS	S	AA	AA
	Q 0872	VSBF422////-1	TRT BF422 PHILIPS	S	AA	AA
	Q 0883	RH-TX0180BMZZ	TRT BF421 TOSHIBA	S	AA	AB
	Q 0885	RH-TX0180BMZZ	TRT BF421 TOSHIBA	S	AA	AB
	Q 0887	RH-TX0180BMZZ	TRT BF421 TOSHIBA	S	AA	AB
			DIODES			
	D 0811	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0812	RH-DX0045BMZZ	DIODE 1N4148	S	AA	AA
	D 0880	VHD1SS82///1A	DIODE 1SS82-A HITACHI	S	AA	AB
	D 0881	VHD1SS82///1A	DIODE 1SS82-A HITACHI	S	AA	AB
	D 0882	VHD1SS82///1A	DIODE 1SS82-A HITACHI	S	AA	AB
			CAPACITORS			
	C 0871	VCKYPA1HB471K	CERAM C 470PF 10% 50V	S	AA	AA
	C 0872	VCKYPA1HB471K	CERAM C 470PF 10% 50V	S	AA	AA
	C 0873	VCKYPA1HB471K	CERAM C 470PF 10% 50V	S	AA	AA
	C 0875	VCKYPA2HB102K	CERAM C 1NF 10% 500V	S	AA	AA
	C 0876	RC-KZ0150CEZZ	CERAM C DE0707-726E102Z3K-A MURATA	S	AA	AB
	C 0878	VCEAGA2EW336M	ELEC C 33UF 20% 250V	S	AA	AD
	C 0880	VCKYPA1HB471K	CERAM C 470PF 10% 50V	S	AA	AA
	C 0881	VCKYPA1HB471K	CERAM C 470PF 10% 50V	S	AA	AA
	C 0882	VCKYPA1HB471K	CERAM C 470PF 10% 50V	S	AA	AA
			RESISTORS			
	P 0851	QPLGN0441CEZZ	PLUG 4PIN	S	AA	AA
	P 0882	QPLGN0541CEZZ	PLUG	S	AA	AA
	P 0883	QTIPM0017CEFM	TIP	S	AA	AA
	R 0871	VRD-RA2BE563J	RES 56KOHM 5% 1/8W	S	AA	AA
	R 0879	VRD-RA2BE471J	RES 470 OHM 5% 1/8W	S	AA	AA
	R 0880	VRD-RA2BE471J	RES 470 OHM 5% 1/8W	S	AA	AA
	R 0881	VRD-RA2BE471J	RES 470 OHM 5% 1/8W	S	AA	AA

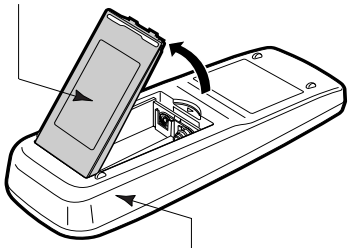
	REF No.	PARTS	DESCRIPTION	*	SN CODE	EX CODE
	R 0882	VRS-VV3DB153J	MET OX RES 15KOHM 5% 2W	S	AA	AA
	R 0883	VRD-RA2HD272J	RES 2,7KOHM 5% 1/2W	S	AA	AA
	R 0884	VRS-VV3DB153J	MET OX RES 15KOHM 5% 2W	S	AA	AA
	R 0885	VRD-RA2HD272J	RES 2,7KOHM 5% 1/2W	S	AA	AA
	R 0886	VRS-VV3DB153J	MET OX RES 15KOHM 5% 2W	S	AA	AA
	R 0887	VRD-RA2HD272J	RES 2,7KOHM 5% 1/2W	S	AA	AA
	R 0892	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA
	R 0893	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA
	R 0894	VRD-RA2BE102J	RES 1KOHM 5% 1/8W	S	AA	AA
	R 0895	VRD-RA2BE471J	RES 470 OHM 5% 1/8W	S	AA	AA
	R 0896	VRD-RA2BE471J	RES 470 OHM 5% 1/8W	S	AA	AA
	R 0899	VRD-RA2BE471J	RES 470 OHM 5% 1/8W	S	AA	AA
			MISCELLANEOUS PARTS			
		QCNW-5969CEZZ	WIRE (H)	S	AA	AC
		QCNW-5970CEZZ	WIRE (K)	S	AA	AC
⚠	SC 0882	QSOCV0016PEZZ	CRT SOCKET 1SHM07S-L_A_	S	AA	AE
	PWB-C		**JACK UNIT**			
			DIODES			
	D 1301	RH-EX0630GEZZ	ZENER DIODE	S	AA	AA
			COILS			
	L 1301	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
	L 1302	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
	L 1303	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
!	L 1304	VP-DF3R3K0000	PEAK COIL 3,3UH 10%	S	AB	AB
			CAPACITORS			
	C 1301	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
	C 1302	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
	C 1303	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
	C 1304	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
	C 1305	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
	C 1306	VCEAEA1CW106M	ELEC C 10UF 20% 16V	S	AA	AA
	C 1307	VCKYPA1HB102K	C.CAPACITOR 1000PF/50V	S	AA	AA
			RESISTORS			
	P 1301	QPLGN0741CEZZ	PLUG	S	AA	AA
	P 1302	QPLGN0341CEZZ	PLUG	S	AA	AA
	R 1301	VRD-RA2BE471J	RES 470 OHM 5% 1/8W	S	AA	AA
	R 1302	VRD-RA2BE471J	RES 470 OHM 5% 1/8W	S	AA	AA
	R 1303	VRD-RA2BE104J	RES 100KOHM 5% 1/8W	S	AA	AA
			MISCELLANEOUS PARTS			
		QCNW-B148WJZZ	HEADPHONE WIRE A	S	AB	AD
		QCNW-B149WJZZ	WIRE B FRONT JACK	S	AA	AD
		QJAKJ0047CEZZ	EARPHONE JACK HSJ0998-72	S	AA	AG
		QKITPB758WJZZ	PWB BARE BOARD	S	AG	AR
		QPWBFB758WJZZ	PWB	S	--	--
	J 1301	QJAKEA020WJ02	JACK	S	AA	AB
			MISCELLANEOUS PARTS			
		LHLDW1009CEZZ	HOLDER	S	AA	AA
		LHLDW1019CEZZ	HOLDER	S	AA	AB
		LHLDW1033CE00	HOLDER	S	AA	AA
		LHLDW1060CEZZ	HOLDER	S	AA	AA
		LHLDW1506BMZZ	WIREHOLDER OF PLASTIC	S	AA	AA
		LHLDZ1714BMZZ	HOLDER ANODE CAP	S	AA	AA
		QCNW-B151WJZZ	SPAEAKER WIRE STEREO	S	AB	AE
		RRMCGA006WJSA	R/C HTR228-010060-A HOSHIDEN	S	AK	AW
		SPAKPA111WJZZ	CEL-AIR WRAPPER	S	AB	AF
		UBATU0013TAZZ	BATTERY R6(X2) TOSHIBA	S	AB	AF
⚠		CACCZ2049WEV5	A.C CORD 14" 15" 20" 21"	S	AK	AR
		LHLDZ0106PEZZ	HOLDER	S	AA	AB
		LHLDZA123WJZZ	HOLDER	S	--	--
		VSP1205PB10WA	SPEAKER	S	AD	AN
		XTASD30P12000	SCREW	S	AA	AA
		TINS-A563WJN0	OWNERS MANUAL 21KF80C	S	AN	AY
		SPAKCA425WJZZ	PACKING CASE	S	AL	AX
		SPAKXA174WJZZ	PACK-AD	S	AH	AT
		XTASD40P12000	SCREW	S	AA	AA
			CABINET PARTS			
⚠	1	CCABAA197BMV0	CABINET SET 21KF80S	S	AV	BG
	1.1	HBDGB3155CESA	SHARP BADGE	S	AB	AF
	1.2	HDECQA152WJSA	DECORATION LED	S	AA	AD
	1.3	GDORFA025WJSA	DOOR	S	AB	AF
	1.4	JBTN-A105WJSA	POWER BUTTON	S	AA	AD
	1.5	HINDPA277WJSA	INDICATOR DOOR	S	AC	AG
⚠	2	GCABBA132WJKA	REAR CABINET	S	AR	BC
	3	XTASB40P20000	SCREW	S	AA	AA





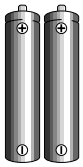
ACCESSORIES

R/C Battery Cover
GCOVHA009WJSA



Remote Control
RRMCGA006WJSA

Batteries R6(x2)
UBATU0013TAZZ



Operation
Manual Set

TINS-A563WJN0, Operation Manual

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